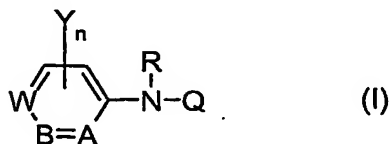


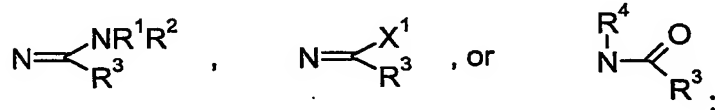
The use of N-arylhydrazine derivatives for combating pests in and on animals

The present invention relates to the use of hydrazine derivatives of formula I:



wherein

Q is



X¹ is chlorine, bromine, or fluorine;

R¹, R² are each independently hydrogen, C₁-C₁₀-alkyl, C₃-C₁₀-alkenyl, C₃-C₁₀-alkynyl, or C₃-C₁₂-cycloalkyl, C₁-C₆-alkylamino, di(C₁-C₆-alkyl)-amino, C₁-C₆-alkylcarbonylamino, C₁-C₆-alkylsulfonyl, or C₁-C₆-alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with

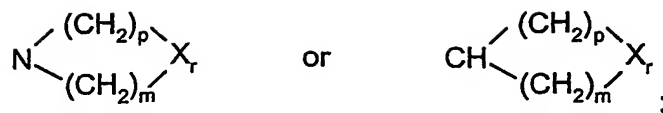
1 to 3 halogen, hydroxy, nitro, cyano, amino, mercapto, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfonyl, C₁-C₆-haloalkylsulfinyl, or C₃-C₆-cycloalkyl which may be substituted with 1 to 3 R[#] groups, or

R[#] is halogen, cyano, nitro, hydroxy, mercapto, amino, C₁-C₆-alkoxy, C₂-C₆-alkenyloxy, C₂-C₆-alkynyloxy, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, or C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylamino, di(C₁-C₆-alkyl)-amino, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, or di(C₁-C₆)-alkylaminocarbonyl;

formyl, C₁-C₆-alkylcarbonyl, C(=O)NR^aR^b, CO₂R^c, R^d, R^e, phenyl which may be substituted with 1 to 3 R[#] groups, or pyridyl which may be substituted with 1 to 3 R[#] groups,

R^a, R^b, R^c are each independently hydrogen or C₁-C₄-alkyl which may be substituted with 1 to 3 groups R[#];

R^d is NR^lR^j or



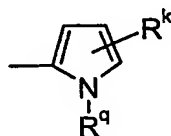
$\text{R}^{\text{I}}, \text{R}^{\text{J}}$ are each independently hydrogen or C_1 - C_4 -alkyl which may be substituted with 1 to 3 groups $\text{R}^{\#}$;

p, m are each independently 0, 1, 2, or 3, with the proviso that p and m are not both 0.

X is oxygen, sulfur, amino, C_1 - C_4 -alkylamino, or phenylamino, or, if p is 0 then X can also be phenoxy or C_1 - C_6 -alkoxy;

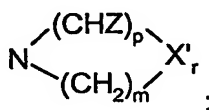
r is 0 or 1;

R^{e} is



$\text{R}^{\text{k}}, \text{R}^{\text{a}}$ are each independently hydrogen or C_1 - C_4 -alkyl which may be substituted with 1 to 3 groups $\text{R}^{\#}$; or

R^1 and R^2 may be taken together to form a ring represented by the structure



p, m are 1, 2 or 3;

X' is oxygen, sulfur, amino, C_1 - C_4 -alkylamino, phenylamino, or methylene;

Z is C_1 - C_4 -alkyl or phenyl;

R^3 is hydrogen, C_1 - C_{10} -alkyl, C_2 - C_{10} -alkenyl, C_2 - C_{10} -alkynyl, C_3 - C_{12} -cycloalkyl, wherein the carbon atoms in these groups may be partially or fully halogenated or substituted with

1 to 3 cyano, nitro, hydroxy, mercapto, amino, C_1 - C_6 -alkyl, C_3 - C_6 -cycloalkyl, C_1 - C_6 -alkoxy, C_1 - C_6 -alkylamino, di(C_1 - C_6 -alkyl)-amino, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyl, or C_1 - C_6 -alkylsulfinyl groups, wherein the carbon atoms in these groups may be substituted by

1 to 3 halogen atoms, a 5- to 6-membered aromatic ring system which may contain 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen and which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C_1 - C_6 -alkyl, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfonyl,

C₁-C₆-alkylsulfinyl, C₁-C₆-alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms, or

phenoxy, which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C₁-C₆-alkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms, or

a 3- to 6-membered saturated or partially unsaturated ring system which contains 1 to 3 heteroatoms selected from oxygen, sulfur and nitrogen and which may be substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C₁-C₆-alkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms,

a 3- to 6-membered saturated or partially unsaturated ring system which contains 1 to 3 heteroatoms selected from oxygen, sulfur and nitrogen and which is unsubstituted or substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C₁-C₆-alkyl, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted by 1 to 3 halogen atoms;

R, R⁴ are each independently hydrogen or C₁-C₆-alkyl, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylaminocarbonyl, or di(C₁-C₆-alkyl)-aminocarbonyl, wherein the carbon atoms in the these groups may be substituted with 1 to 3 groups R[#];

A is C-R⁵ or N;

B is C-R⁶ or N;

W is C-R⁷ or N;

with the proviso that one of A, B and W is other than N;

R⁵, R⁶, R⁷ are each independently hydrogen, halogen, nitro, cyano, amino, mercapto, hydroxy, C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₁-C₆-alkylamino, di(C₁-C₆-alkyl)-amino, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, or C₁-C₆-alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups R[#]

a 5- to 6-membered aromatic ringsystem which may contain 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen and which may be

substituted with any combination of 1 to 5 halogen atoms, 1 to 3 C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylthio, C₁-C₆-haloalkylthio, C₁-C₆-alkylsulfonyl, C₁-C₆-alkylsulfinyl, C₁-C₆-haloalkylsulfonyl, C₁-C₆-haloalkylsulfinyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, mercapto, hydroxy, amino, nitro, or cyano groups, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups R[#] ;

Y is hydrogen, halogen, cyano, nitro, amino, hydroxy, mercapto, C₁-C₆-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₁-C₆-alkylamino, di(C₁-C₆)-alkylamino, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, or C₁-C₆-alkylsulfinyl, wherein the carbon atoms in these groups may be substituted with 1 to 3 groups R[#];

n is 0, 1, or 2;

or the enantiomers or diastereomers, veterinarily acceptable salts or esters thereof, for combating parasites in and on animals.

It is generally a goal of agronomists and veterinarians to possess sufficient means to control parasites, when they attempt to invade or attack animals.

It is an object of the present invention to provide new methods to control parasites in and on animals. Another object of the invention is to provide safer pesticides for animals. Another object of the invention is to provide pesticides for animals that may be used in lower doses than existing pesticides. Another object of the invention is to provide pesticides for animals which provide a long residual control of the parasites.

These objects are met in whole or in part by the present invention.

The invention also relates to compositions containing a parasitically effective amount of compounds of formula I and an acceptable carrier, for combating parasites in and on animals.

The present invention also provides a method for treating, controlling, preventing and protecting animals against infestation and infection by parasites, which comprises orally, topically or parenterally administering or applying to the animals a parasitically effective amount of a compound of formula I or a composition comprising it.

The invention also provides a process for the preparation of a composition for treating, controlling, preventing or protecting animals against infestation or infection by

parasites which comprises a parasitically effective amount of a compound of formula I or a composition comprising it.

The insecticidal and acaricidal activity in crop protection of some of the compounds of formula I has been described in EP-A 604 798, and also in J. A Furch et al., "Amidrazones: A New Class of Coleopteran Insecticides", ACS Symposium Series 686, Am. Chem. Soc., 1998, Chapter 18, p. 178 ff, and also in D. G. Kuhn et al., "Cycloalkyl-substituted Amidrazones: A Novel Class of Insect Control Agents", ACS Symposium Series 686, Am. Chem. Soc., 1998, Chapter 19, p. 185 ff.

Activity of compounds against agricultural pests does not suggest their suitability for control of endo- and ectoparasites in and on animals which requires, for example, low, non-emetic dosages in the case of oral application, metabolic compatibility with the animal, low toxicity, and a safe handling.

Surprisingly it has now been found that compounds of formula I are suitable for combating endo- and ectoparasites in and on animals.

The compounds of formula I can be prepared according to preparation methods described or referenced in EP-A 604 798 or modifications thereof.

In the definition of formula I shown above, the substituents have the following meanings:

"Halogen" will be taken to mean fluoro, chloro, bromo and iodo.

The term "alkyl" as used herein refers to a branched or unbranched saturated hydrocarbon group having 1 to 10 carbon atoms, especially C₁-C₆-alkyl such as methyl, ethyl, propyl, 1-methylethyl, butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 2,2-dimethylpropyl, 1-ethylpropyl, hexyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

The term "haloalkyl" as used herein refers to a straight-chain or branched alkyl groups having 1 to 10 carbon atoms (as mentioned above), where some or all of the hydrogen atoms in these groups may be replaced by halogen atoms as mentioned above, for example C₁-C₂-haloalkyl, such as chloromethyl, bromomethyl, dichloromethyl, trichloromethyl, fluoromethyl, difluoromethyl, trifluoromethyl, chlorofluoromethyl, dichlorofluoromethyl, chlorodifluoromethyl, 1-chloroethyl, 1-bromoethyl, 1-fluoroethyl,

2-fluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 2-chloro-2-fluoroethyl, 2-chloro-2,2-difluoroethyl, 2,2-dichloro-2-fluoroethyl, 2,2,2-trichloroethyl and pentafluoroethyl;

5 "Alkoxy" refers to straight-chain or branched alkyl group having 1 to 4 or 6 carbon atoms (as mentioned above) bonded through an oxygen linkage, at any bond in the alkyl group. Examples include methoxy, ethoxy, propoxy, and isopropoxy.

10 Likewise, the terms "alkylthio", "alkylamino", "dialkylamino", "alkylsulfonyl", and alkylsulfinyl" refer to straight-chain or branched alkyl group having 1 to 4 or 6 carbon atoms (as mentioned above) bonded through a sulfur-, -NH-, -N-, -S(=O)₂-, or S(=O)- linkage, respectively.

The term "alkenyl" as used herein intends a branched or unbranched unsaturated hydrocarbon group having 3 to 10 carbon atoms and a double bond in any position, 15 such as C₃-C₆ alkenyl such as 1-propenyl, 2-propenyl, 1-methyl-ethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl; 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1- 20 dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, 1-hexenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 1-methyl-1-pentenyl, 2-methyl-1-pentenyl, 3-methyl-1-pentenyl, 4-methyl-1-pentenyl, 1-methyl-2-pentenyl, 2-methyl-2-pentenyl, 3-methyl-2-pentenyl, 4-methyl-2-pentenyl, 1-methyl-3-pentenyl, 2-methyl-3-pentenyl, 3-methyl-3-pentenyl, 4-methyl-3-pentenyl, 1- 25 methyl-4-pentenyl, 2-methyl-4-pentenyl, 3-methyl-4-pentenyl, 4-methyl-4-pentenyl, 1,1-dimethyl-2-butenyl, 1,1-dimethyl-3-butenyl, 1,2-dimethyl-1-butenyl, 1,2-dimethyl-2-butenyl, 1,2-dimethyl-3-butenyl, 1,3-dimethyl-1-butenyl, 1,3-dimethyl-2-butenyl, 1,3-dimethyl-3-butenyl, 2,2-dimethyl-3-butenyl, 2,3-dimethyl-1-butenyl, 2,3-dimethyl-2-butenyl, 2,3-dimethyl-3-butenyl, 3,3-dimethyl-1-butenyl, 3,3-dimethyl-2-butenyl, 1-ethyl- 30 1-butenyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 2-ethyl-1-butenyl, 2-ethyl-2-butenyl, 2-ethyl-3-butenyl, 1,1,2-trimethyl-2-propenyl, 1-ethyl-1-methyl-2-propenyl, 1-ethyl-2-methyl-1-propenyl and 1-ethyl-2-methyl-2-propenyl;

35 "Cycloalkyl" refers to a monocyclic 3- to 6-, 8-, 10- or 12-membered saturated carbon atom rings, e.g. C₃-C₈-cycloalkyl such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl and cyclooctyl.

A 5- to 6-membered aromatic ring system containing 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen, intends e.g. 5-membered hetaryl, containing 1 to 4 40 nitrogen atoms or 1 to 3 nitrogen atoms and 1 sulfur or oxygen atom, e.g. furyl, thienyl, pyrrolyl, isoxazolyl, isothiazolyl, pyrazolyl, oxazolyl, thiazolyl, imidazolyl, oxadiazolyl, thiadiazolyl, oxadiazolyl, triazolyl, and tetrazolyl; or 6-membered hetaryl, containing 1

to 4 nitrogen atoms or 1 to 3 nitrogen atoms and 1 sulfur or oxygen atom, e.g. 2-pyridinyl, 3-pyridinyl, 4-pyridinyl, 3-pyridazinyl, 4-pyridazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 2-pyrazinyl, 1,3,5-triazin-2-yl and 1,2,4-triazin-3-yl;

5 a 3- to 6-membered saturated or partially unsaturated ring system which contains 1 to 3 heteroatoms selected from oxygen, sulfur and nitrogen intends e.g. a saturated 3- to 6-membered ringsystem containing 1 to 3 heteroatoms selected from nitrogen and oxygen, such as aziridine, pyrrolidine, tetrahydrofuran, tetrahydropyran, or piperidine.

10 By the term "veterinarily acceptable salts" is meant salts the anions of which are known and accepted in the art for the formation of salts for veterinary use. Suitable acid addition salts, e.g. formed by compounds of formula I containing a basic nitrogen atom, e.g. an amino group, include salts with inorganic acids, for example hydrochlorids, sulphates, phosphates, and nitrates and salts of organic acids for
15 example acetic acid, maleic acid, dimaleic acid, fumaric acid, difumaric acid, methane sulfenic acid, methane sulfonic acid, and succinic acid.

With respect to the intended use of the compounds of formula I, particular preference is given to the following meanings of the substituents, in each case on their own or in
20 combination:

Preference is given to compounds of formula I wherein A denotes $C-R^5$.

Moreover, preference is given to compounds of formula I wherein B denotes $C-R^6$.
25

Preference is also given to compounds of formula I wherein W denotes $C-R^7$.

Particular preference is given to compounds wherein A denotes $C-R^5$, B denotes $C-R^6$, and W denotes $C-R^7$.
30

Moreover, preference is given to compounds of formula I wherein R^5 is halogen or C_1-C_6 -haloalkyl, with halogen, especially chlorine, being most preferred.

Preference is also given to compounds of formula I wherein R^6 is hydrogen or halogen,
35 especially hydrogen.

Preference is further given to compounds of formula I wherein R^7 is halogen or C_1-C_6 -haloalkyl, preferably C_1-C_6 -haloalkyl, especially trifluoromethyl.

40 Moreover, preference is given to compounds of formula I wherein Y is in the ortho-position and is halogen or C_1-C_6 -haloalkyl. Particular preference is given to compounds of formula I wherein Y is halogen, especially chlorine.

Preference is given to compounds of formula I wherein n is 1.

Preference is also given to compounds of formula I wherein Q denotes

5 $-N=[C(NR^1R^2)R^3]$.

Moreover, preference is given to compounds of formula I wherein X^1 is chlorine.

10 Preference is also given to compounds of formula I wherein R denotes C_1 - C_6 -alkyl or hydrogen, preferably hydrogen.

Preference is also given to compounds of formula I wherein R^1 and R^2 each independently are hydrogen, C_1 - C_{10} -alkyl which may be substituted by C_1 - C_4 -alkoxy, or C_3 - C_{10} -cycloalkyl which may be substituted with from 1 to 3 halogen.

15

Moreover, preference is given to compounds of formula I wherein R^1 and R^2 each independently are hydrogen, C_1 - C_4 -alkyl, or C_3 - C_6 -cycloalkyl.

20 Especially preferred are compounds of formula I wherein R^1 is hydrogen and R^2 is C_1 - C_{10} -alkyl which may be substituted by C_1 - C_4 -alkoxy, or C_3 - C_{10} -cycloalkyl which may be substituted with from 1 to 3 halogen. Compounds of formula I wherein R^1 is hydrogen and R^2 is C_1 - C_4 -alkyl or C_3 - C_6 -cycloalkyl are given special preference.

25 Moreover, preference is given to compounds of formula I wherein R^3 is unsubstituted C_1 - C_{10} -alkyl or C_3 - C_{10} -cycloalkyl, which may be substituted with 1 to 5 halogen atoms and/or 1 to 3 C_1 - C_6 -alkyl groups.

Particularly preferred are compounds of formula I wherein R^3 is tert.-butyl.

30 Moreover, particularly preferred are compounds of formula I wherein R^3 is cyclopropyl which may be substituted with C_1 - C_6 -alkyl or halogen, especially 1-methyl-2,2-dichlorocyclopropyl.

35 Moreover, preference is given to compounds of formula I wherein R^4 is hydrogen or C_1 - C_6 -alkyl.

40 With respect to their use, particular preference is given to the compounds I-A compiled in the tables below. Moreover, the groups mentioned for a substituent in the tables are on their own, independently of the combination in which they are mentioned, a particularly preferred embodiment of the substituent in question.

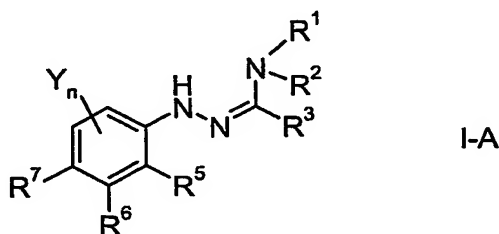
With respect to their use, particular preference is also given to the hydrochloric acid, maleic acid, dimaleic acid, fumaric acid, difumaric acid, methane sulfenic acid, methane sulfonic acid, and succinic acid adducts of the compounds of the tables below.

5

Some of the compounds of formula I are new. These are also subject-matter of this invention.

Table 1

- 10 Compounds of the formula I-A wherein R^3 is methyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.



15 Table 2

Compounds of the formula I-A wherein R^3 is ethyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 3

- 20 Compounds of the formula I-A wherein R^3 is ethyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 4

- 25 Compounds of the formula I-A wherein R^3 is propyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 5

- 30 Compounds of the formula I-A wherein R^3 is isopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 6

- Compounds of the formula I-A wherein R^3 is isobutyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

35 Table 7

Compounds of the formula I-A wherein R^3 is tert-butyl and the combination of R^1 , R^2 ,

R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 8

Compounds of the formula I-A wherein R^3 is neopentyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 9

Compounds of the formula I-A wherein R^3 is cyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 10

Compounds of the formula I-A wherein R^3 is 1,1-dimethyl-propyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 11

Compounds of the formula I-A wherein R^3 is cyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 12

Compounds of the formula I-A wherein R^3 is 2,2-dichloro-cyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 13

Compounds of the formula I-A wherein R^3 is 2,2-dibromo-cyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 14

Compounds of the formula I-A wherein R^3 is 1-methyl-cyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 15

Compounds of the formula I-A wherein R^3 is 1-methyl-2,2-dichlorocyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table 16

Compounds of the formula I-A wherein R^3 is 1-methyl-2,2-dibromocyclopropyl and the combination of R^1 , R^2 , R^5 , R^6 , R^7 and Y_n corresponds in each case to a row of Table A.

Table A

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1	H	H	Cl	H	H	H
A-2	CH ₃	CH ₃	Cl	H	H	H
A-3	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	H	H
A-4	CH ₃	H	Cl	H	H	H
A-5	CH ₂ CH ₃	H	Cl	H	H	H
A-6	(CH ₂) ₂ CH ₃	H	Cl	H	H	H
A-7	CH(CH ₃) ₂	H	Cl	H	H	H
A-8	CH ₂ CF ₃	H	Cl	H	H	H
A-9	C(CH ₃) ₃	H	Cl	H	H	H
A-10	CH ₂ CH(CH ₃) ₂	H	Cl	H	H	H
A-11	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	H	H
A-12	(CH ₂) ₂ OCH ₃	H	Cl	H	H	H
A-13	CH ₂ CH(OCH ₃) ₂	H	Cl	H	H	H
A-14	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	H	H
A-15	CH ₂ C ₆ H ₅	H	Cl	H	H	H
A-16	CH(CH ₃)C ₆ H ₅	H	Cl	H	H	H
A-17	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	H	H
A-18	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	H	H
A-19	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	H	H
A-20	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	H	H
A-21	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	H	H
A-22	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	H	H
A-23	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	H	H
A-24	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	H	H
A-25	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	H	H
A-26	CH ₂ CH=CH ₂	H	Cl	H	H	H
A-27	cyclo-C ₃ H ₅	H	Cl	H	H	H
A-28	(CH ₂) ₂ NHCH ₃	H	Cl	H	H	H
A-29	H	H	F	H	H	H
A-30	CH ₃	CH ₃	F	H	H	H
A-31	CH ₂ CH ₃	CH ₂ CH ₃	F	H	H	H
A-32	CH ₃	H	F	H	H	H
A-33	CH ₂ CH ₃	H	F	H	H	H
A-34	(CH ₂) ₂ CH ₃	H	F	H	H	H
A-35	CH(CH ₃) ₂	H	F	H	H	H
A-36	CH ₂ CF ₃	H	F	H	H	H
A-37	C(CH ₃) ₃	H	F	H	H	H
A-38	CH ₂ CH(CH ₃) ₂	H	F	H	H	H
A-39	CH(CH ₃)CH ₂ CH ₃	H	F	H	H	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-40	(CH ₂) ₂ OCH ₃	H	F	H	H	H
A-41	CH ₂ CH(OCH ₃) ₂	H	F	H	H	H
A-42	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	H	H
A-43	CH ₂ C ₆ H ₅	H	F	H	H	H
A-44	CH(CH ₃)C ₆ H ₅	H	F	H	H	H
A-45	(CH ₂) ₂ OC ₆ H ₅	H	F	H	H	H
A-46	(CH ₂) ₂ C ₆ H ₅	H	F	H	H	H
A-47	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	H	H
A-48	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	H	H
A-49	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	H	H
A-50	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	H	H
A-51	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	H	H
A-52	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	H	H
A-53	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	H	H
A-54	CH ₂ CH=CH ₂	H	F	H	H	H
A-55	cyclo-C ₃ H ₅	H	F	H	H	H
A-56	(CH ₂) ₂ NHCH ₃	H	F	H	H	H
A-57	H	H	CF ₃	H	H	H
A-58	CH ₃	CH ₃	CF ₃	H	H	H
A-59	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	H	H
A-60	CH ₃	H	CF ₃	H	H	H
A-61	CH ₂ CH ₃	H	CF ₃	H	H	H
A-62	(CH ₂) ₂ CH ₃	H	CF ₃	H	H	H
A-63	CH(CH ₃) ₂	H	CF ₃	H	H	H
A-64	CH ₂ CF ₃	H	CF ₃	H	H	H
A-65	C(CH ₃) ₃	H	CF ₃	H	H	H
A-66	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	H	H
A-67	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	H	H
A-68	(CH ₂) ₂ OCH ₃	H	CF ₃	H	H	H
A-69	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	H	H
A-70	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	H	H
A-71	CH ₂ C ₆ H ₅	H	CF ₃	H	H	H
A-72	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	H	H
A-73	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	H	H
A-74	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	H	H
A-75	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	H	H
A-76	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	H	H
A-77	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	H	H
A-78	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	H	H
A-79	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	H	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-80	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	H	H
A-81	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	H	H
A-82	CH ₂ CH=CH ₂	H	CF ₃	H	H	H
A-83	cyclo-C ₃ H ₅	H	CF ₃	H	H	H
A-84	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	H	H
A-85	H	H	H	H	Cl	H
A-86	CH ₃	CH ₃	H	H	Cl	H
A-87	CH ₂ CH ₃	CH ₂ CH ₃	H	H	Cl	H
A-88	CH ₃	H	H	H	Cl	H
A-89	CH ₂ CH ₃	H	H	H	Cl	H
A-90	(CH ₂) ₂ CH ₃	H	H	H	Cl	H
A-91	CH(CH ₃) ₂	H	H	H	Cl	H
A-92	CH ₂ CF ₃	H	H	H	Cl	H
A-93	C(CH ₃) ₃	H	H	H	Cl	H
A-94	CH ₂ CH(CH ₃) ₂	H	H	H	Cl	H
A-95	CH(CH ₃)CH ₂ CH ₃	H	H	H	Cl	H
A-96	(CH ₂) ₂ OCH ₃	H	H	H	Cl	H
A-97	CH ₂ CH(OCH ₃) ₂	H	H	H	Cl	H
A-98	CH ₂ CH(OCH ₂ CH ₃) ₂	H	H	H	Cl	H
A-99	CH ₂ C ₆ H ₅	H	H	H	Cl	H
A-100	CH(CH ₃)C ₆ H ₅	H	H	H	Cl	H
A-101	(CH ₂) ₂ OC ₆ H ₅	H	H	H	Cl	H
A-102	(CH ₂) ₂ C ₆ H ₅	H	H	H	Cl	H
A-103	(CH ₂) ₂ C ₆ H ₄ F	H	H	H	Cl	H
A-104	(CH ₂) ₂ C ₆ H ₄ Cl	H	H	H	Cl	H
A-105	(CH ₂) ₂ C ₆ H ₄ CN	H	H	H	Cl	H
A-106	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	H	H	Cl	H
A-107	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	H	H	Cl	H
A-108	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	H	H	Cl	H
A-109	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	H	H	Cl	H
A-110	CH ₂ CH=CH ₂	H	H	H	Cl	H
A-111	cyclo-C ₃ H ₅	H	H	H	Cl	H
A-112	(CH ₂) ₂ NHCH ₃	H	H	H	Cl	H
A-113	H	H	H	H	F	H
A-114	CH ₃	CH ₃	H	H	F	H
A-115	CH ₂ CH ₃	CH ₂ CH ₃	H	H	F	H
A-116	CH ₃	H	H	H	F	H
A-117	CH ₂ CH ₃	H	H	H	F	H
A-118	(CH ₂) ₂ CH ₃	H	H	H	F	H
A-119	CH(CH ₃) ₂	H	H	H	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-120	CH ₂ CF ₃	H	H	H	F	H
A-121	C(CH ₃) ₃	H	H	H	F	H
A-122	CH ₂ CH(CH ₃) ₂	H	H	H	F	H
A-123	CH(CH ₃)CH ₂ CH ₃	H	H	H	F	H
A-124	(CH ₂) ₂ OCH ₃	H	H	H	F	H
A-125	CH ₂ CH(OCH ₃) ₂	H	H	H	F	H
A-126	CH ₂ CH(OCH ₂ CH ₃) ₂	H	H	H	F	H
A-127	CH ₂ C ₆ H ₅	H	H	H	F	H
A-128	CH(CH ₃)C ₆ H ₅	H	H	H	F	H
A-129	(CH ₂) ₂ OC ₆ H ₅	H	H	H	F	H
A-130	(CH ₂) ₂ C ₆ H ₅	H	H	H	F	H
A-131	(CH ₂) ₂ C ₆ H ₄ F	H	H	H	F	H
A-132	(CH ₂) ₂ C ₆ H ₄ Cl	H	H	H	F	H
A-133	(CH ₂) ₂ C ₆ H ₄ CN	H	H	H	F	H
A-134	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	H	H	F	H
A-135	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	H	H	F	H
A-136	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	H	H	F	H
A-137	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	H	H	F	H
A-138	CH ₂ CH=CH ₂	H	H	H	F	H
A-139	cyclo-C ₃ H ₅	H	H	H	F	H
A-140	(CH ₂) ₂ NHCH ₃	H	H	H	F	H
A-141	H	H	H	H	CF ₃	H
A-142	CH ₃	CH ₃	H	H	CF ₃	H
A-143	CH ₂ CH ₃	CH ₂ CH ₃	H	H	CF ₃	H
A-144	CH ₃	H	H	H	CF ₃	H
A-145	CH ₂ CH ₃	H	H	H	CF ₃	H
A-146	(CH ₂) ₂ CH ₃	H	H	H	CF ₃	H
A-147	CH(CH ₃) ₂	H	H	H	CF ₃	H
A-148	CH ₂ CF ₃	H	H	H	CF ₃	H
A-149	C(CH ₃) ₃	H	H	H	CF ₃	H
A-150	CH ₂ CH(CH ₃) ₂	H	H	H	CF ₃	H
A-151	CH(CH ₃)CH ₂ CH ₃	H	H	H	CF ₃	H
A-152	(CH ₂) ₂ OCH ₃	H	H	H	CF ₃	H
A-153	CH ₂ CH(OCH ₃) ₂	H	H	H	CF ₃	H
A-154	CH ₂ CH(OCH ₂ CH ₃) ₂	H	H	H	CF ₃	H
A-155	CH ₂ C ₆ H ₅	H	H	H	CF ₃	H
A-156	CH(CH ₃)C ₆ H ₅	H	H	H	CF ₃	H
A-157	(CH ₂) ₂ OC ₆ H ₅	H	H	H	CF ₃	H
A-158	(CH ₂) ₂ C ₆ H ₅	H	H	H	CF ₃	H
A-159	(CH ₂) ₂ C ₆ H ₄ F	H	H	H	CF ₃	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-160	(CH ₂) ₂ C ₆ H ₄ Cl	H	H	H	CF ₃	H
A-161	(CH ₂) ₂ C ₆ H ₄ CN	H	H	H	CF ₃	H
A-162	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	H	H	CF ₃	H
A-163	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	H	H	CF ₃	H
A-164	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	H	H	CF ₃	H
A-165	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	H	H	CF ₃	H
A-166	CH ₂ CH=CH ₂	H	H	H	CF ₃	H
A-167	cyclo-C ₃ H ₅	H	H	H	CF ₃	H
A-168	(CH ₂) ₂ NHCH ₃	H	H	H	CF ₃	H
A-169	H	H	Cl	H	Cl	H
A-170	CH ₃	CH ₃	Cl	H	Cl	H
A-171	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	Cl	H
A-172	CH ₃	H	Cl	H	Cl	H
A-173	CH ₂ CH ₃	H	Cl	H	Cl	H
A-174	(CH ₂) ₂ CH ₃	H	Cl	H	Cl	H
A-175	CH(CH ₃) ₂	H	Cl	H	Cl	H
A-176	CH ₂ CF ₃	H	Cl	H	Cl	H
A-177	C(CH ₃) ₃	H	Cl	H	Cl	H
A-178	CH ₂ CH(CH ₃) ₂	H	Cl	H	Cl	H
A-179	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	Cl	H
A-180	(CH ₂) ₂ OCH ₃	H	Cl	H	Cl	H
A-181	CH ₂ CH(OCH ₃) ₂	H	Cl	H	Cl	H
A-182	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	Cl	H
A-183	CH ₂ C ₆ H ₅	H	Cl	H	Cl	H
A-184	CH(CH ₃)C ₆ H ₅	H	Cl	H	Cl	H
A-185	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	Cl	H
A-186	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	Cl	H
A-187	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	Cl	H
A-188	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	Cl	H
A-189	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	Cl	H
A-190	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	Cl	H
A-191	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	Cl	H
A-192	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	Cl	H
A-193	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	Cl	H
A-194	CH ₂ CH=CH ₂	H	Cl	H	Cl	H
A-195	cyclo-C ₃ H ₅	H	Cl	H	Cl	H
A-196	(CH ₂) ₂ NHCH ₃	H	Cl	H	Cl	H
A-197	H	H	F	H	Cl	H
A-198	CH ₃	CH ₃	F	H	Cl	H
A-199	CH ₂ CH ₃	CH ₂ CH ₃	F	H	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-200	CH ₃	H	F	H	Cl	H
A-201	CH ₂ CH ₃	H	F	H	Cl	H
A-202	(CH ₂) ₂ CH ₃	H	F	H	Cl	H
A-203	CH(CH ₃) ₂	H	F	H	Cl	H
A-204	CH ₂ CF ₃	H	F	H	Cl	H
A-205	C(CH ₃) ₃	H	F	H	Cl	H
A-206	CH ₂ CH(CH ₃) ₂	H	F	H	Cl	H
A-207	CH(CH ₃)CH ₂ CH ₃	H	F	H	Cl	H
A-208	(CH ₂) ₂ OCH ₃	H	F	H	Cl	H
A-209	CH ₂ CH(OCH ₃) ₂	H	F	H	Cl	H
A-210	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	Cl	H
A-211	CH ₂ C ₆ H ₅	H	F	H	Cl	H
A-212	CH(CH ₃)C ₆ H ₅	H	F	H	Cl	H
A-213	(CH ₂) ₂ OC ₆ H ₅	H	F	H	Cl	H
A-214	(CH ₂) ₂ C ₆ H ₅	H	F	H	Cl	H
A-215	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	Cl	H
A-216	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	Cl	H
A-217	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	Cl	H
A-218	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	Cl	H
A-219	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	Cl	H
A-220	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	Cl	H
A-221	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	Cl	H
A-222	CH ₂ CH=CH ₂	H	F	H	Cl	H
A-223	cyclo-C ₃ H ₅	H	F	H	Cl	H
A-224	(CH ₂) ₂ NHCH ₃	H	F	H	Cl	H
A-225	H	H	Cl	H	F	H
A-226	CH ₃	CH ₃	Cl	H	F	H
A-227	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	F	H
A-228	CH ₃	H	Cl	H	F	H
A-229	CH ₂ CH ₃	H	Cl	H	F	H
A-230	(CH ₂) ₂ CH ₃	H	Cl	H	F	H
A-231	CH(CH ₃) ₂	H	Cl	H	F	H
A-232	CH ₂ CF ₃	H	Cl	H	F	H
A-233	C(CH ₃) ₃	H	Cl	H	F	H
A-234	CH ₂ CH(CH ₃) ₂	H	Cl	H	F	H
A-235	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	F	H
A-236	(CH ₂) ₂ OCH ₃	H	Cl	H	F	H
A-237	CH ₂ CH(OCH ₃) ₂	H	Cl	H	F	H
A-238	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	F	H
A-239	CH ₂ C ₆ H ₅	H	Cl	H	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-240	CH(CH ₃)C ₆ H ₅	H	Cl	H	F	H
A-241	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	F	H
A-242	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	F	H
A-243	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	F	H
A-244	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	F	H
A-245	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	F	H
A-246	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	F	H
A-247	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	F	H
A-248	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	F	H
A-249	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	F	H
A-250	CH ₂ CH=CH ₂	H	Cl	H	F	H
A-251	cyclo-C ₃ H ₅	H	Cl	H	F	H
A-252	(CH ₂) ₂ NHCH ₃	H	Cl	H	F	H
A-253	H	H	F	H	F	H
A-254	CH ₃	CH ₃	F	H	F	H
A-255	CH ₂ CH ₃	CH ₂ CH ₃	F	H	F	H
A-256	CH ₃	H	F	H	F	H
A-257	CH ₂ CH ₃	H	F	H	F	H
A-258	(CH ₂) ₂ CH ₃	H	F	H	F	H
A-259	CH(CH ₃) ₂	H	F	H	F	H
A-260	CH ₂ CF ₃	H	F	H	F	H
A-261	C(CH ₃) ₃	H	F	H	F	H
A-262	CH ₂ CH(CH ₃) ₂	H	F	H	F	H
A-263	CH(CH ₃)CH ₂ CH ₃	H	F	H	F	H
A-264	(CH ₂) ₂ OCH ₃	H	F	H	F	H
A-265	CH ₂ CH(OCH ₃) ₂	H	F	H	F	H
A-266	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	F	H
A-267	CH ₂ C ₆ H ₅	H	F	H	F	H
A-268	CH(CH ₃)C ₆ H ₅	H	F	H	F	H
A-269	(CH ₂) ₂ OC ₆ H ₅	H	F	H	F	H
A-270	(CH ₂) ₂ C ₆ H ₅	H	F	H	F	H
A-271	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	F	H
A-272	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	F	H
A-273	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	F	H
A-274	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	F	H
A-275	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	F	H
A-276	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	F	H
A-277	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	F	H
A-278	CH ₂ CH=CH ₂	H	F	H	F	H
A-279	cyclo-C ₃ H ₅	H	F	H	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-280	(CH ₂) ₂ NHCH ₃	H	F	H	F	H
A-281	H	H	Cl	H	CF ₃	H
A-282	CH ₃	CH ₃	Cl	H	CF ₃	H
A-283	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	CF ₃	H
A-284	CH ₃	H	Cl	H	CF ₃	H
A-285	CH ₂ CH ₃	H	Cl	H	CF ₃	H
A-286	(CH ₂) ₂ CH ₃	H	Cl	H	CF ₃	H
A-287	CH(CH ₃) ₂	H	Cl	H	CF ₃	H
A-288	CH ₂ CF ₃	H	Cl	H	CF ₃	H
A-289	C(CH ₃) ₃	H	Cl	H	CF ₃	H
A-290	CH ₂ CH(CH ₃) ₂	H	Cl	H	CF ₃	H
A-291	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	CF ₃	H
A-292	(CH ₂) ₂ OCH ₃	H	Cl	H	CF ₃	H
A-293	CH ₂ CH(OCH ₃) ₂	H	Cl	H	CF ₃	H
A-294	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	CF ₃	H
A-295	CH ₂ C ₆ H ₅	H	Cl	H	CF ₃	H
A-296	CH(CH ₃)C ₆ H ₅	H	Cl	H	CF ₃	H
A-297	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	CF ₃	H
A-298	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	CF ₃	H
A-299	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	CF ₃	H
A-300	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	CF ₃	H
A-301	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	CF ₃	H
A-302	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	CF ₃	H
A-303	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	CF ₃	H
A-304	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	CF ₃	H
A-305	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	CF ₃	H
A-306	CH ₂ CH=CH ₂	H	Cl	H	CF ₃	H
A-307	cyclo-C ₃ H ₅	H	Cl	H	CF ₃	H
A-308	(CH ₂) ₂ NHCH ₃	H	Cl	H	CF ₃	H
A-309	H	H	CF ₃	H	Cl	H
A-310	CH ₃	CH ₃	CF ₃	H	Cl	H
A-311	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	Cl	H
A-312	CH ₃	H	CF ₃	H	Cl	H
A-313	CH ₂ CH ₃	H	CF ₃	H	Cl	H
A-314	(CH ₂) ₂ CH ₃	H	CF ₃	H	Cl	H
A-315	CH(CH ₃) ₂	H	CF ₃	H	Cl	H
A-316	CH ₂ CF ₃	H	CF ₃	H	Cl	H
A-317	C(CH ₃) ₃	H	CF ₃	H	Cl	H
A-318	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	Cl	H
A-319	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-320	(CH ₂) ₂ OCH ₃	H	CF ₃	H	Cl	H
A-321	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	Cl	H
A-322	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	Cl	H
A-323	CH ₂ C ₆ H ₅	H	CF ₃	H	Cl	H
A-324	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	Cl	H
A-325	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	Cl	H
A-326	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	Cl	H
A-327	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	Cl	H
A-328	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	Cl	H
A-329	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	Cl	H
A-330	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	Cl	H
A-331	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	Cl	H
A-332	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	Cl	H
A-333	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	Cl	H
A-334	CH ₂ CH=CH ₂	H	CF ₃	H	Cl	H
A-335	cyclo-C ₃ H ₅	H	CF ₃	H	Cl	H
A-336	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	Cl	H
A-337	H	H	F	H	CF ₃	H
A-338	CH ₃	CH ₃	F	H	CF ₃	H
A-339	CH ₂ CH ₃	CH ₂ CH ₃	F	H	CF ₃	H
A-340	CH ₃	H	F	H	CF ₃	H
A-341	CH ₂ CH ₃	H	F	H	CF ₃	H
A-342	(CH ₂) ₂ CH ₃	H	F	H	CF ₃	H
A-343	CH(CH ₃) ₂	H	F	H	CF ₃	H
A-344	CH ₂ CF ₃	H	F	H	CF ₃	H
A-345	C(CH ₃) ₃	H	F	H	CF ₃	H
A-346	CH ₂ CH(CH ₃) ₂	H	F	H	CF ₃	H
A-347	CH(CH ₃)CH ₂ CH ₃	H	F	H	CF ₃	H
A-348	(CH ₂) ₂ OCH ₃	H	F	H	CF ₃	H
A-349	CH ₂ CH(OCH ₃) ₂	H	F	H	CF ₃	H
A-350	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	CF ₃	H
A-351	CH ₂ C ₆ H ₅	H	F	H	CF ₃	H
A-352	CH(CH ₃)C ₆ H ₅	H	F	H	CF ₃	H
A-353	(CH ₂) ₂ OC ₆ H ₅	H	F	H	CF ₃	H
A-354	(CH ₂) ₂ C ₆ H ₅	H	F	H	CF ₃	H
A-355	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	CF ₃	H
A-356	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	CF ₃	H
A-357	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	CF ₃	H
A-358	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	CF ₃	H
A-359	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	CF ₃	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-360	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	CF ₃	H
A-361	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	CF ₃	H
A-362	CH ₂ CH=CH ₂	H	F	H	CF ₃	H
A-363	cyclo-C ₃ H ₅	H	F	H	CF ₃	H
A-364	(CH ₂) ₂ NHCH ₃	H	F	H	CF ₃	H
A-365	H	H	CF ₃	H	F	H
A-366	CH ₃	CH ₃	CF ₃	H	F	H
A-367	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	F	H
A-368	CH ₃	H	CF ₃	H	F	H
A-369	CH ₂ CH ₃	H	CF ₃	H	F	H
A-370	(CH ₂) ₂ CH ₃	H	CF ₃	H	F	H
A-371	CH(CH ₃) ₂	H	CF ₃	H	F	H
A-372	CH ₂ CF ₃	H	CF ₃	H	F	H
A-373	C(CH ₃) ₃	H	CF ₃	H	F	H
A-374	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	F	H
A-375	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	F	H
A-376	(CH ₂) ₂ OCH ₃	H	CF ₃	H	F	H
A-377	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	F	H
A-378	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	F	H
A-379	CH ₂ C ₆ H ₅	H	CF ₃	H	F	H
A-380	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	F	H
A-381	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	F	H
A-382	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	F	H
A-383	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	F	H
A-384	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	F	H
A-385	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	F	H
A-386	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	F	H
A-387	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	F	H
A-388	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	F	H
A-389	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	F	H
A-390	CH ₂ CH=CH ₂	H	CF ₃	H	F	H
A-391	cyclo-C ₃ H ₅	H	CF ₃	H	F	H
A-392	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	F	H
A-393	H	H	CF ₃	H	CF ₃	H
A-394	CH ₃	CH ₃	CF ₃	H	CF ₃	H
A-395	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	CF ₃	H
A-396	CH ₃	H	CF ₃	H	CF ₃	H
A-397	CH ₂ CH ₃	H	CF ₃	H	CF ₃	H
A-398	(CH ₂) ₂ CH ₃	H	CF ₃	H	CF ₃	H
A-399	CH(CH ₃) ₂	H	CF ₃	H	CF ₃	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-400	CH ₂ CF ₃	H	CF ₃	H	CF ₃	H
A-401	C(CH ₃) ₃	H	CF ₃	H	CF ₃	H
A-402	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	CF ₃	H
A-403	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	CF ₃	H
A-404	(CH ₂) ₂ OCH ₃	H	CF ₃	H	CF ₃	H
A-405	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	CF ₃	H
A-406	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	CF ₃	H
A-407	CH ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	H
A-408	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	CF ₃	H
A-409	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	CF ₃	H
A-410	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	H
A-411	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	CF ₃	H
A-412	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	CF ₃	H
A-413	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	CF ₃	H
A-414	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	CF ₃	H
A-415	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	CF ₃	H
A-416	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	CF ₃	H
A-417	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	CF ₃	H
A-418	CH ₂ CH=CH ₂	H	CF ₃	H	CF ₃	H
A-419	cyclo-C ₃ H ₅	H	CF ₃	H	CF ₃	H
A-420	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	CF ₃	H
A-421	H	H	Cl	Cl	Cl	H
A-422	CH ₃	CH ₃	Cl	Cl	Cl	H
A-423	CH ₂ CH ₃	CH ₂ CH ₃	Cl	Cl	Cl	H
A-424	CH ₃	H	Cl	Cl	Cl	H
A-425	CH ₂ CH ₃	H	Cl	Cl	Cl	H
A-426	(CH ₂) ₂ CH ₃	H	Cl	Cl	Cl	H
A-427	CH(CH ₃) ₂	H	Cl	Cl	Cl	H
A-428	CH ₂ CF ₃	H	Cl	Cl	Cl	H
A-429	C(CH ₃) ₃	H	Cl	Cl	Cl	H
A-430	CH ₂ CH(CH ₃) ₂	H	Cl	Cl	Cl	H
A-431	CH(CH ₃)CH ₂ CH ₃	H	Cl	Cl	Cl	H
A-432	(CH ₂) ₂ OCH ₃	H	Cl	Cl	Cl	H
A-433	CH ₂ CH(OCH ₃) ₂	H	Cl	Cl	Cl	H
A-434	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	Cl	Cl	H
A-435	CH ₂ C ₆ H ₅	H	Cl	Cl	Cl	H
A-436	CH(CH ₃)C ₆ H ₅	H	Cl	Cl	Cl	H
A-437	(CH ₂) ₂ OC ₆ H ₅	H	Cl	Cl	Cl	H
A-438	(CH ₂) ₂ C ₆ H ₅	H	Cl	Cl	Cl	H
A-439	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	Cl	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-440	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	Cl	Cl	H
A-441	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	Cl	Cl	H
A-442	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	Cl	Cl	H
A-443	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	Cl	Cl	H
A-444	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	Cl	Cl	H
A-445	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	Cl	Cl	H
A-446	CH ₂ CH=CH ₂	H	Cl	Cl	Cl	H
A-447	cyclo-C ₃ H ₅	H	Cl	Cl	Cl	H
A-448	(CH ₂) ₂ NHCH ₃	H	Cl	Cl	Cl	H
A-449	H	H	Cl	F	Cl	H
A-450	CH ₃	CH ₃	Cl	F	Cl	H
A-451	CH ₂ CH ₃	CH ₂ CH ₃	Cl	F	Cl	H
A-452	CH ₃	H	Cl	F	Cl	H
A-453	CH ₂ CH ₃	H	Cl	F	Cl	H
A-454	(CH ₂) ₂ CH ₃	H	Cl	F	Cl	H
A-455	CH(CH ₃) ₂	H	Cl	F	Cl	H
A-456	CH ₂ CF ₃	H	Cl	F	Cl	H
A-457	C(CH ₃) ₃	H	Cl	F	Cl	H
A-458	CH ₂ CH(CH ₃) ₂	H	Cl	F	Cl	H
A-459	CH(CH ₃)CH ₂ CH ₃	H	Cl	F	Cl	H
A-460	(CH ₂) ₂ OCH ₃	H	Cl	F	Cl	H
A-461	CH ₂ CH(OCH ₃) ₂	H	Cl	F	Cl	H
A-462	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	F	Cl	H
A-463	CH ₂ C ₆ H ₅	H	Cl	F	Cl	H
A-464	CH(CH ₃)C ₆ H ₅	H	Cl	F	Cl	H
A-465	(CH ₂) ₂ OC ₆ H ₅	H	Cl	F	Cl	H
A-466	(CH ₂) ₂ C ₆ H ₅	H	Cl	F	Cl	H
A-467	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	F	Cl	H
A-468	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	F	Cl	H
A-469	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	F	Cl	H
A-470	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	F	Cl	H
A-471	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	F	Cl	H
A-472	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	F	Cl	H
A-473	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	F	Cl	H
A-474	CH ₂ CH=CH ₂	H	Cl	F	Cl	H
A-475	cyclo-C ₃ H ₅	H	Cl	F	Cl	H
A-476	(CH ₂) ₂ NHCH ₃	H	Cl	F	Cl	H
A-477	H	H	Cl	Cl	F	H
A-478	CH ₃	CH ₃	Cl	Cl	F	H
A-479	CH ₂ CH ₃	CH ₂ CH ₃	Cl	Cl	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-480	CH ₃	H	Cl	Cl	F	H
A-481	CH ₂ CH ₃	H	Cl	Cl	F	H
A-482	(CH ₂) ₂ CH ₃	H	Cl	Cl	F	H
A-483	CH(CH ₃) ₂	H	Cl	Cl	F	H
A-484	CH ₂ CF ₃	H	Cl	Cl	F	H
A-485	C(CH ₃) ₃	H	Cl	Cl	F	H
A-486	CH ₂ CH(CH ₃) ₂	H	Cl	Cl	F	H
A-487	CH(CH ₃)CH ₂ CH ₃	H	Cl	Cl	F	H
A-488	(CH ₂) ₂ OCH ₃	H	Cl	Cl	F	H
A-489	CH ₂ CH(OCH ₃) ₂	H	Cl	Cl	F	H
A-490	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	Cl	F	H
A-491	CH ₂ C ₆ H ₅	H	Cl	Cl	F	H
A-492	CH(CH ₃)C ₆ H ₅	H	Cl	Cl	F	H
A-493	(CH ₂) ₂ OC ₆ H ₅	H	Cl	Cl	F	H
A-494	(CH ₂) ₂ C ₆ H ₅	H	Cl	Cl	F	H
A-495	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	Cl	F	H
A-496	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	Cl	F	H
A-497	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	Cl	F	H
A-498	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	Cl	F	H
A-499	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	Cl	F	H
A-500	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	Cl	F	H
A-501	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	Cl	F	H
A-502	CH ₂ CH=CH ₂	H	Cl	Cl	F	H
A-503	cyclo-C ₃ H ₅	H	Cl	Cl	F	H
A-504	(CH ₂) ₂ NHCH ₃	H	Cl	Cl	F	H
A-505	H	H	F	Cl	Cl	H
A-506	CH ₃	CH ₃	F	Cl	Cl	H
A-507	CH ₂ CH ₃	CH ₂ CH ₃	F	Cl	Cl	H
A-508	CH ₃	H	F	Cl	Cl	H
A-509	CH ₂ CH ₃	H	F	Cl	Cl	H
A-510	(CH ₂) ₂ CH ₃	H	F	Cl	Cl	H
A-511	CH(CH ₃) ₂	H	F	Cl	Cl	H
A-512	CH ₂ CF ₃	H	F	Cl	Cl	H
A-513	C(CH ₃) ₃	H	F	Cl	Cl	H
A-514	CH ₂ CH(CH ₃) ₂	H	F	Cl	Cl	H
A-515	CH(CH ₃)CH ₂ CH ₃	H	F	Cl	Cl	H
A-516	(CH ₂) ₂ OCH ₃	H	F	Cl	Cl	H
A-517	CH ₂ CH(OCH ₃) ₂	H	F	Cl	Cl	H
A-518	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	Cl	Cl	H
A-519	CH ₂ C ₆ H ₅	H	F	Cl	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-520	CH(CH ₃)C ₆ H ₅	H	F	Cl	Cl	H
A-521	(CH ₂) ₂ OC ₆ H ₅	H	F	Cl	Cl	H
A-522	(CH ₂) ₂ C ₆ H ₅	H	F	Cl	Cl	H
A-523	(CH ₂) ₂ C ₆ H ₄ F	H	F	Cl	Cl	H
A-524	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	Cl	Cl	H
A-525	(CH ₂) ₂ C ₆ H ₄ CN	H	F	Cl	Cl	H
A-526	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	Cl	Cl	H
A-527	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	Cl	Cl	H
A-528	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	Cl	Cl	H
A-529	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	Cl	Cl	H
A-530	CH ₂ CH=CH ₂	H	F	Cl	Cl	H
A-531	cyclo-C ₃ H ₅	H	F	Cl	Cl	H
A-532	(CH ₂) ₂ NHCH ₃	H	F	Cl	Cl	H
A-533	H	H	F	F	Cl	H
A-534	CH ₃	CH ₃	F	F	Cl	H
A-535	CH ₂ CH ₃	CH ₂ CH ₃	F	F	Cl	H
A-536	CH ₃	H	F	F	Cl	H
A-537	CH ₂ CH ₃	H	F	F	Cl	H
A-538	(CH ₂) ₂ CH ₃	H	F	F	Cl	H
A-539	CH(CH ₃) ₂	H	F	F	Cl	H
A-540	CH ₂ CF ₃	H	F	F	Cl	H
A-541	C(CH ₃) ₃	H	F	F	Cl	H
A-542	CH ₂ CH(CH ₃) ₂	H	F	F	Cl	H
A-543	CH(CH ₃)CH ₂ CH ₃	H	F	F	Cl	H
A-544	(CH ₂) ₂ OCH ₃	H	F	F	Cl	H
A-545	CH ₂ CH(OCH ₃) ₂	H	F	F	Cl	H
A-546	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	F	Cl	H
A-547	CH ₂ C ₆ H ₅	H	F	F	Cl	H
A-548	CH(CH ₃)C ₆ H ₅	H	F	F	Cl	H
A-549	(CH ₂) ₂ OC ₆ H ₅	H	F	F	Cl	H
A-550	(CH ₂) ₂ C ₆ H ₅	H	F	F	Cl	H
A-551	(CH ₂) ₂ C ₆ H ₄ F	H	F	F	Cl	H
A-552	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	F	Cl	H
A-553	(CH ₂) ₂ C ₆ H ₄ CN	H	F	F	Cl	H
A-554	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	F	Cl	H
A-555	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	F	Cl	H
A-556	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	F	Cl	H
A-557	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	F	Cl	H
A-558	CH ₂ CH=CH ₂	H	F	F	Cl	H
A-559	cyclo-C ₃ H ₅	H	F	F	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-560	(CH ₂) ₂ NHCH ₃	H	F	F	Cl	H
A-561	H	H	F	Cl	F	H
A-562	CH ₃	CH ₃	F	Cl	F	H
A-563	CH ₂ CH ₃	CH ₂ CH ₃	F	Cl	F	H
A-564	CH ₃	H	F	Cl	F	H
A-565	CH ₂ CH ₃	H	F	Cl	F	H
A-566	(CH ₂) ₂ CH ₃	H	F	Cl	F	H
A-567	CH(CH ₃) ₂	H	F	Cl	F	H
A-568	CH ₂ CF ₃	H	F	Cl	F	H
A-569	C(CH ₃) ₃	H	F	Cl	F	H
A-570	CH ₂ CH(CH ₃) ₂	H	F	Cl	F	H
A-571	CH(CH ₃)CH ₂ CH ₃	H	F	Cl	F	H
A-572	(CH ₂) ₂ OCH ₃	H	F	Cl	F	H
A-573	CH ₂ CH(OCH ₃) ₂	H	F	Cl	F	H
A-574	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	Cl	F	H
A-575	CH ₂ C ₆ H ₅	H	F	Cl	F	H
A-576	CH(CH ₃)C ₆ H ₅	H	F	Cl	F	H
A-577	(CH ₂) ₂ OC ₆ H ₅	H	F	Cl	F	H
A-578	(CH ₂) ₂ C ₆ H ₅	H	F	Cl	F	H
A-579	(CH ₂) ₂ C ₆ H ₄ F	H	F	Cl	F	H
A-580	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	Cl	F	H
A-581	(CH ₂) ₂ C ₆ H ₄ CN	H	F	Cl	F	H
A-582	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	Cl	F	H
A-583	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	Cl	F	H
A-584	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	Cl	F	H
A-585	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	Cl	F	H
A-586	CH ₂ CH=CH ₂	H	F	Cl	F	H
A-587	cyclo-C ₃ H ₅	H	F	Cl	F	H
A-588	(CH ₂) ₂ NHCH ₃	H	F	Cl	F	H
A-589	H	H	Cl	F	F	H
A-590	CH ₃	CH ₃	Cl	F	F	H
A-591	CH ₂ CH ₃	CH ₂ CH ₃	Cl	F	F	H
A-592	CH ₃	H	Cl	F	F	H
A-593	CH ₂ CH ₃	H	Cl	F	F	H
A-594	(CH ₂) ₂ CH ₃	H	Cl	F	F	H
A-595	CH(CH ₃) ₂	H	Cl	F	F	H
A-596	CH ₂ CF ₃	H	Cl	F	F	H
A-597	C(CH ₃) ₃	H	Cl	F	F	H
A-598	CH ₂ CH(CH ₃) ₂	H	Cl	F	F	H
A-599	CH(CH ₃)CH ₂ CH ₃	H	Cl	F	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-600	(CH ₂) ₂ OCH ₃	H	Cl	F	F	H
A-601	CH ₂ CH(OCH ₃) ₂	H	Cl	F	F	H
A-602	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	F	F	H
A-603	CH ₂ C ₆ H ₅	H	Cl	F	F	H
A-604	CH(CH ₃)C ₆ H ₅	H	Cl	F	F	H
A-605	(CH ₂) ₂ OC ₆ H ₅	H	Cl	F	F	H
A-606	(CH ₂) ₂ C ₆ H ₅	H	Cl	F	F	H
A-607	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	F	F	H
A-608	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	F	F	H
A-609	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	F	F	H
A-610	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	F	F	H
A-611	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	F	F	H
A-612	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	F	F	H
A-613	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	F	F	H
A-614	CH ₂ CH=CH ₂	H	Cl	F	F	H
A-615	cyclo-C ₃ H ₅	H	Cl	F	F	H
A-616	(CH ₂) ₂ NHCH ₃	H	Cl	F	F	H
A-617	H	H	F	F	F	H
A-618	CH ₃	CH ₃	F	F	F	H
A-619	CH ₂ CH ₃	CH ₂ CH ₃	F	F	F	H
A-620	CH ₃	H	F	F	F	H
A-621	CH ₂ CH ₃	H	F	F	F	H
A-622	(CH ₂) ₂ CH ₃	H	F	F	F	H
A-623	CH(CH ₃) ₂	H	F	F	F	H
A-624	CH ₂ CF ₃	H	F	F	F	H
A-625	C(CH ₃) ₃	H	F	F	F	H
A-626	CH ₂ CH(CH ₃) ₂	H	F	F	F	H
A-627	CH(CH ₃)CH ₂ CH ₃	H	F	F	F	H
A-628	(CH ₂) ₂ OCH ₃	H	F	F	F	H
A-629	CH ₂ CH(OCH ₃) ₂	H	F	F	F	H
A-630	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	F	F	H
A-631	CH ₂ C ₆ H ₅	H	F	F	F	H
A-632	CH(CH ₃)C ₆ H ₅	H	F	F	F	H
A-633	(CH ₂) ₂ OC ₆ H ₅	H	F	F	F	H
A-634	(CH ₂) ₂ C ₆ H ₅	H	F	F	F	H
A-635	(CH ₂) ₂ C ₆ H ₄ F	H	F	F	F	H
A-636	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	F	F	H
A-637	(CH ₂) ₂ C ₆ H ₄ CN	H	F	F	F	H
A-638	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	F	F	H
A-639	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	F	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-640	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	F	F	H
A-641	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	F	F	H
A-642	CH ₂ CH=CH ₂	H	F	F	F	H
A-643	cyclo-C ₃ H ₅	H	F	F	F	H
A-644	(CH ₂) ₂ NHCH ₃	H	F	F	F	H
A-645	H	H	Cl	Cl	CF ₃	H
A-646	CH ₃	CH ₃	Cl	Cl	CF ₃	H
A-647	CH ₂ CH ₃	CH ₂ CH ₃	Cl	Cl	CF ₃	H
A-648	CH ₃	H	Cl	Cl	CF ₃	H
A-649	CH ₂ CH ₃	H	Cl	Cl	CF ₃	H
A-650	(CH ₂) ₂ CH ₃	H	Cl	Cl	CF ₃	H
A-651	CH(CH ₃) ₂	H	Cl	Cl	CF ₃	H
A-652	CH ₂ CF ₃	H	Cl	Cl	CF ₃	H
A-653	C(CH ₃) ₃	H	Cl	Cl	CF ₃	H
A-654	CH ₂ CH(CH ₃) ₂	H	Cl	Cl	CF ₃	H
A-655	CH(CH ₃)CH ₂ CH ₃	H	Cl	Cl	CF ₃	H
A-656	(CH ₂) ₂ OCH ₃	H	Cl	Cl	CF ₃	H
A-657	CH ₂ CH(OCH ₃) ₂	H	Cl	Cl	CF ₃	H
A-658	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	Cl	CF ₃	H
A-659	CH ₂ C ₆ H ₅	H	Cl	Cl	CF ₃	H
A-660	CH(CH ₃)C ₆ H ₅	H	Cl	Cl	CF ₃	H
A-661	(CH ₂) ₂ OC ₆ H ₅	H	Cl	Cl	CF ₃	H
A-662	(CH ₂) ₂ C ₆ H ₅	H	Cl	Cl	CF ₃	H
A-663	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	Cl	CF ₃	H
A-664	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	Cl	CF ₃	H
A-665	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	Cl	CF ₃	H
A-666	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	Cl	CF ₃	H
A-667	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	Cl	CF ₃	H
A-668	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	Cl	CF ₃	H
A-669	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	Cl	CF ₃	H
A-670	CH ₂ CH=CH ₂	H	Cl	Cl	CF ₃	H
A-671	cyclo-C ₃ H ₅	H	Cl	Cl	CF ₃	H
A-672	(CH ₂) ₂ NHCH ₃	H	Cl	Cl	CF ₃	H
A-673	H	H	CF ₃	Cl	Cl	H
A-674	CH ₃	CH ₃	CF ₃	Cl	Cl	H
A-675	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	Cl	Cl	H
A-676	CH ₃	H	CF ₃	Cl	Cl	H
A-677	CH ₂ CH ₃	H	CF ₃	Cl	Cl	H
A-678	(CH ₂) ₂ CH ₃	H	CF ₃	Cl	Cl	H
A-679	CH(CH ₃) ₂	H	CF ₃	Cl	Cl	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-680	CH ₂ CF ₃	H	CF ₃	Cl	Cl	H
A-681	C(CH ₃) ₃	H	CF ₃	Cl	Cl	H
A-682	CH ₂ CH(CH ₃) ₂	H	CF ₃	Cl	Cl	H
A-683	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	Cl	Cl	H
A-684	(CH ₂) ₂ OCH ₃	H	CF ₃	Cl	Cl	H
A-685	CH ₂ CH(OCH ₃) ₂	H	CF ₃	Cl	Cl	H
A-686	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	Cl	Cl	H
A-687	CH ₂ C ₆ H ₅	H	CF ₃	Cl	Cl	H
A-688	CH(CH ₃)C ₆ H ₅	H	CF ₃	Cl	Cl	H
A-689	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	Cl	Cl	H
A-690	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	Cl	Cl	H
A-691	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	Cl	Cl	H
A-692	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	Cl	Cl	H
A-693	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	Cl	Cl	H
A-694	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	Cl	Cl	H
A-695	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	Cl	Cl	H
A-696	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	Cl	Cl	H
A-697	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	Cl	Cl	H
A-698	CH ₂ CH=CH ₂	H	CF ₃	Cl	Cl	H
A-699	cyclo-C ₃ H ₅	H	CF ₃	Cl	Cl	H
A-700	(CH ₂) ₂ NHCH ₃	H	CF ₃	Cl	Cl	H
A-701	H	H	CF ₃	Cl	F	H
A-702	CH ₃	CH ₃	CF ₃	Cl	F	H
A-703	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	Cl	F	H
A-704	CH ₃	H	CF ₃	Cl	F	H
A-705	CH ₂ CH ₃	H	CF ₃	Cl	F	H
A-706	(CH ₂) ₂ CH ₃	H	CF ₃	Cl	F	H
A-707	CH(CH ₃) ₂	H	CF ₃	Cl	F	H
A-708	CH ₂ CF ₃	H	CF ₃	Cl	F	H
A-709	C(CH ₃) ₃	H	CF ₃	Cl	F	H
A-710	CH ₂ CH(CH ₃) ₂	H	CF ₃	Cl	F	H
A-711	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	Cl	F	H
A-712	(CH ₂) ₂ OCH ₃	H	CF ₃	Cl	F	H
A-713	CH ₂ CH(OCH ₃) ₂	H	CF ₃	Cl	F	H
A-714	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	Cl	F	H
A-715	CH ₂ C ₆ H ₅	H	CF ₃	Cl	F	H
A-716	CH(CH ₃)C ₆ H ₅	H	CF ₃	Cl	F	H
A-717	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	Cl	F	H
A-718	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	Cl	F	H
A-719	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	Cl	F	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-720	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	Cl	F	H
A-721	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	Cl	F	H
A-722	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	Cl	F	H
A-723	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	Cl	F	H
A-724	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	Cl	F	H
A-725	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	Cl	F	H
A-726	CH ₂ CH=CH ₂	H	CF ₃	Cl	F	H
A-727	cyclo-C ₃ H ₅	H	CF ₃	Cl	F	H
A-728	(CH ₂) ₂ NHCH ₃	H	CF ₃	Cl	F	H
A-729	H	H	F	Cl	CF ₃	H
A-730	CH ₃	CH ₃	F	Cl	CF ₃	H
A-731	CH ₂ CH ₃	CH ₂ CH ₃	F	Cl	CF ₃	H
A-732	CH ₃	H	F	Cl	CF ₃	H
A-733	CH ₂ CH ₃	H	F	Cl	CF ₃	H
A-734	(CH ₂) ₂ CH ₃	H	F	Cl	CF ₃	H
A-735	CH(CH ₃) ₂	H	F	Cl	CF ₃	H
A-736	CH ₂ CF ₃	H	F	Cl	CF ₃	H
A-737	C(CH ₃) ₃	H	F	Cl	CF ₃	H
A-738	CH ₂ CH(CH ₃) ₂	H	F	Cl	CF ₃	H
A-739	CH(CH ₃)CH ₂ CH ₃	H	F	Cl	CF ₃	H
A-740	(CH ₂) ₂ OCH ₃	H	F	Cl	CF ₃	H
A-741	CH ₂ CH(OCH ₃) ₂	H	F	Cl	CF ₃	H
A-742	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	Cl	CF ₃	H
A-743	CH ₂ C ₆ H ₅	H	F	Cl	CF ₃	H
A-744	CH(CH ₃)C ₆ H ₅	H	F	Cl	CF ₃	H
A-745	(CH ₂) ₂ OC ₆ H ₅	H	F	Cl	CF ₃	H
A-746	(CH ₂) ₂ C ₆ H ₅	H	F	Cl	CF ₃	H
A-747	(CH ₂) ₂ C ₆ H ₄ F	H	F	Cl	CF ₃	H
A-748	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	Cl	CF ₃	H
A-749	(CH ₂) ₂ C ₆ H ₄ CN	H	F	Cl	CF ₃	H
A-750	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	Cl	CF ₃	H
A-751	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	Cl	CF ₃	H
A-752	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	Cl	CF ₃	H
A-753	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	Cl	CF ₃	H
A-754	CH ₂ CH=CH ₂	H	F	Cl	CF ₃	H
A-755	cyclo-C ₃ H ₅	H	F	Cl	CF ₃	H
A-756	(CH ₂) ₂ NHCH ₃	H	F	Cl	CF ₃	H
A-757	H	H	F	Cl	CF ₃	H
A-758	CH ₃	CH ₃	F	Cl	CF ₃	H
A-759	CH ₂ CH ₃	CH ₂ CH ₃	F	Cl	CF ₃	H

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-760	CH ₃	H	F	Cl	CF ₃	H
A-761	CH ₂ CH ₃	H	F	Cl	CF ₃	H
A-762	(CH ₂) ₂ CH ₃	H	F	Cl	CF ₃	H
A-763	CH(CH ₃) ₂	H	F	Cl	CF ₃	H
A-764	CH ₂ CF ₃	H	F	Cl	CF ₃	H
A-765	C(CH ₃) ₃	H	F	Cl	CF ₃	H
A-766	CH ₂ CH(CH ₃) ₂	H	F	Cl	CF ₃	H
A-767	CH(CH ₃)CH ₂ CH ₃	H	F	Cl	CF ₃	H
A-768	(CH ₂) ₂ OCH ₃	H	F	Cl	CF ₃	H
A-769	CH ₂ CH(OCH ₃) ₂	H	F	Cl	CF ₃	H
A-770	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	Cl	CF ₃	H
A-771	CH ₂ C ₆ H ₅	H	F	Cl	CF ₃	H
A-772	CH(CH ₃)C ₆ H ₅	H	F	Cl	CF ₃	H
A-773	(CH ₂) ₂ OC ₆ H ₅	H	F	Cl	CF ₃	H
A-774	(CH ₂) ₂ C ₆ H ₅	H	F	Cl	CF ₃	H
A-775	(CH ₂) ₂ C ₆ H ₄ F	H	F	Cl	CF ₃	H
A-776	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	Cl	CF ₃	H
A-777	(CH ₂) ₂ C ₆ H ₄ CN	H	F	Cl	CF ₃	H
A-778	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	Cl	CF ₃	H
A-779	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	Cl	CF ₃	H
A-780	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	Cl	CF ₃	H
A-781	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	Cl	CF ₃	H
A-782	CH ₂ CH=CH ₂	H	F	Cl	CF ₃	H
A-783	cyclo-C ₃ H ₅	H	F	Cl	CF ₃	H
A-784	(CH ₂) ₂ NHCH ₃	H	F	Cl	CF ₃	H
A-785	H	H	Cl	H	CF ₃	6-Cl
A-786	CH ₃	CH ₃	Cl	H	CF ₃	6-Cl
A-787	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	CF ₃	6-Cl
A-788	CH ₃	H	Cl	H	CF ₃	6-Cl
A-789	CH ₂ CH ₃	H	Cl	H	CF ₃	6-Cl
A-790	(CH ₂) ₂ CH ₃	H	Cl	H	CF ₃	6-Cl
A-791	CH(CH ₃) ₂	H	Cl	H	CF ₃	6-Cl
A-792	CH ₂ CF ₃	H	Cl	H	CF ₃	6-Cl
A-793	C(CH ₃) ₃	H	Cl	H	CF ₃	6-Cl
A-794	CH ₂ CH(CH ₃) ₂	H	Cl	H	CF ₃	6-Cl
A-795	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	CF ₃	6-Cl
A-796	(CH ₂) ₂ OCH ₃	H	Cl	H	CF ₃	6-Cl
A-797	CH ₂ CH(OCH ₃) ₂	H	Cl	H	CF ₃	6-Cl
A-798	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	CF ₃	6-Cl
A-799	CH ₂ C ₆ H ₅	H	Cl	H	CF ₃	6-Cl

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-800	CH(CH ₃)C ₆ H ₅	H	Cl	H	CF ₃	6-Cl
A-801	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	CF ₃	6-Cl
A-802	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	CF ₃	6-Cl
A-803	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	CF ₃	6-Cl
A-804	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	CF ₃	6-Cl
A-805	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	CF ₃	6-Cl
A-806	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	CF ₃	6-Cl
A-807	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	CF ₃	6-Cl
A-808	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	CF ₃	6-Cl
A-809	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	CF ₃	6-Cl
A-810	CH ₂ CH=CH ₂	H	Cl	H	CF ₃	6-Cl
A-811	cyclo-C ₃ H ₅	H	Cl	H	CF ₃	6-Cl
A-812	(CH ₂) ₂ NHCH ₃	H	Cl	H	CF ₃	6-Cl
A-813	H	H	Cl	H	F	6-Cl
A-814	CH ₃	CH ₃	Cl	H	F	6-Cl
A-815	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	F	6-Cl
A-816	CH ₃	H	Cl	H	F	6-Cl
A-817	CH ₂ CH ₃	H	Cl	H	F	6-Cl
A-818	(CH ₂) ₂ CH ₃	H	Cl	H	F	6-Cl
A-819	CH(CH ₃) ₂	H	Cl	H	F	6-Cl
A-820	CH ₂ CF ₃	H	Cl	H	F	6-Cl
A-821	C(CH ₃) ₃	H	Cl	H	F	6-Cl
A-822	CH ₂ CH(CH ₃) ₂	H	Cl	H	F	6-Cl
A-823	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	F	6-Cl
A-824	(CH ₂) ₂ OCH ₃	H	Cl	H	F	6-Cl
A-825	CH ₂ CH(OCH ₃) ₂	H	Cl	H	F	6-Cl
A-826	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	F	6-Cl
A-827	CH ₂ C ₆ H ₅	H	Cl	H	F	6-Cl
A-828	CH(CH ₃)C ₆ H ₅	H	Cl	H	F	6-Cl
A-829	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	F	6-Cl
A-830	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	F	6-Cl
A-831	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	F	6-Cl
A-832	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	F	6-Cl
A-833	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	F	6-Cl
A-834	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	F	6-Cl
A-835	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	F	6-Cl
A-836	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	F	6-Cl
A-837	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	F	6-Cl
A-838	CH ₂ CH=CH ₂	H	Cl	H	F	6-Cl
A-839	cyclo-C ₃ H ₅	H	Cl	H	F	6-Cl

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-840	(CH ₂) ₂ NHCH ₃	H	Cl	H	F	6-Cl
A-841	H	H	F	H	Cl	6-Cl
A-842	CH ₃	CH ₃	F	H	Cl	6-Cl
A-843	CH ₂ CH ₃	CH ₂ CH ₃	F	H	Cl	6-Cl
A-844	CH ₃	H	F	H	Cl	6-Cl
A-845	CH ₂ CH ₃	H	F	H	Cl	6-Cl
A-846	(CH ₂) ₂ CH ₃	H	F	H	Cl	6-Cl
A-847	CH(CH ₃) ₂	H	F	H	Cl	6-Cl
A-848	CH ₂ CF ₃	H	F	H	Cl	6-Cl
A-849	C(CH ₃) ₃	H	F	H	Cl	6-Cl
A-850	CH ₂ CH(CH ₃) ₂	H	F	H	Cl	6-Cl
A-851	CH(CH ₃)CH ₂ CH ₃	H	F	H	Cl	6-Cl
A-852	(CH ₂) ₂ OCH ₃	H	F	H	Cl	6-Cl
A-853	CH ₂ CH(OCH ₃) ₂	H	F	H	Cl	6-Cl
A-854	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	Cl	6-Cl
A-855	CH ₂ C ₆ H ₅	H	F	H	Cl	6-Cl
A-856	CH(CH ₃)C ₆ H ₅	H	F	H	Cl	6-Cl
A-857	(CH ₂) ₂ OC ₆ H ₅	H	F	H	Cl	6-Cl
A-858	(CH ₂) ₂ C ₆ H ₅	H	F	H	Cl	6-Cl
A-859	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	Cl	6-Cl
A-860	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	Cl	6-Cl
A-861	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	Cl	6-Cl
A-862	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	Cl	6-Cl
A-863	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	Cl	6-Cl
A-864	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	Cl	6-Cl
A-865	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	Cl	6-Cl
A-866	CH ₂ CH=CH ₂	H	F	H	Cl	6-Cl
A-867	cyclo-C ₃ H ₅	H	F	H	Cl	6-Cl
A-868	(CH ₂) ₂ NHCH ₃	H	F	H	Cl	6-Cl
A-869	H	H	Cl	H	Cl	6-Cl
A-870	CH ₃	CH ₃	Cl	H	Cl	6-Cl
A-871	CH ₂ CH ₃	CH ₂ CH ₃	Cl	H	Cl	6-Cl
A-872	CH ₃	H	Cl	H	Cl	6-Cl
A-873	CH ₂ CH ₃	H	Cl	H	Cl	6-Cl
A-874	(CH ₂) ₂ CH ₃	H	Cl	H	Cl	6-Cl
A-875	CH(CH ₃) ₂	H	Cl	H	Cl	6-Cl
A-876	CH ₂ CF ₃	H	Cl	H	Cl	6-Cl
A-877	C(CH ₃) ₃	H	Cl	H	Cl	6-Cl
A-878	CH ₂ CH(CH ₃) ₂	H	Cl	H	Cl	6-Cl
A-879	CH(CH ₃)CH ₂ CH ₃	H	Cl	H	Cl	6-Cl

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-880	(CH ₂) ₂ OCH ₃	H	Cl	H	Cl	6-Cl
A-881	CH ₂ CH(OCH ₃) ₂	H	Cl	H	Cl	6-Cl
A-882	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	H	Cl	6-Cl
A-883	CH ₂ C ₆ H ₅	H	Cl	H	Cl	6-Cl
A-884	CH(CH ₃)C ₆ H ₅	H	Cl	H	Cl	6-Cl
A-885	(CH ₂) ₂ OC ₆ H ₅	H	Cl	H	Cl	6-Cl
A-886	(CH ₂) ₂ C ₆ H ₅	H	Cl	H	Cl	6-Cl
A-887	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	H	Cl	6-Cl
A-888	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	H	Cl	6-Cl
A-889	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	H	Cl	6-Cl
A-890	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	H	Cl	6-Cl
A-891	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	H	Cl	6-Cl
A-892	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	H	Cl	6-Cl
A-893	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	H	Cl	6-Cl
A-894	CH ₂ CH=CH ₂	H	Cl	H	Cl	6-Cl
A-895	cyclo-C ₃ H ₅	H	Cl	H	Cl	6-Cl
A-896	(CH ₂) ₂ NHCH ₃	H	Cl	H	Cl	6-Cl
A-897	H	H	F	H	Cl	6-F
A-898	CH ₃	CH ₃	F	H	Cl	6-F
A-899	CH ₂ CH ₃	CH ₂ CH ₃	F	H	Cl	6-F
A-900	CH ₃	H	F	H	Cl	6-F
A-901	CH ₂ CH ₃	H	F	H	Cl	6-F
A-902	(CH ₂) ₂ CH ₃	H	F	H	Cl	6-F
A-903	CH(CH ₃) ₂	H	F	H	Cl	6-F
A-904	CH ₂ CF ₃	H	F	H	Cl	6-F
A-905	C(CH ₃) ₃	H	F	H	Cl	6-F
A-906	CH ₂ CH(CH ₃) ₂	H	F	H	Cl	6-F
A-907	CH(CH ₃)CH ₂ CH ₃	H	F	H	Cl	6-F
A-908	(CH ₂) ₂ OCH ₃	H	F	H	Cl	6-F
A-909	CH ₂ CH(OCH ₃) ₂	H	F	H	Cl	6-F
A-910	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	Cl	6-F
A-911	CH ₂ C ₆ H ₅	H	F	H	Cl	6-F
A-912	CH(CH ₃)C ₆ H ₅	H	F	H	Cl	6-F
A-913	(CH ₂) ₂ OC ₆ H ₅	H	F	H	Cl	6-F
A-914	(CH ₂) ₂ C ₆ H ₅	H	F	H	Cl	6-F
A-915	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	Cl	6-F
A-916	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	Cl	6-F
A-917	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	Cl	6-F
A-918	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	Cl	6-F
A-919	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	Cl	6-F

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-920	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	Cl	6-F
A-921	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	Cl	6-F
A-922	CH ₂ CH=CH ₂	H	F	H	Cl	6-F
A-923	cyclo-C ₃ H ₅	H	F	H	Cl	6-F
A-924	(CH ₂) ₂ NHCH ₃	H	F	H	Cl	6-F
A-925	H	H	F	H	F	6-Cl
A-926	CH ₃	CH ₃	F	H	F	6-Cl
A-927	CH ₂ CH ₃	CH ₂ CH ₃	F	H	F	6-Cl
A-928	CH ₃	H	F	H	F	6-Cl
A-929	CH ₂ CH ₃	H	F	H	F	6-Cl
A-930	(CH ₂) ₂ CH ₃	H	F	H	F	6-Cl
A-931	CH(CH ₃) ₂	H	F	H	F	6-Cl
A-932	CH ₂ CF ₃	H	F	H	F	6-Cl
A-933	C(CH ₃) ₃	H	F	H	F	6-Cl
A-934	CH ₂ CH(CH ₃) ₂	H	F	H	F	6-Cl
A-935	CH(CH ₃)CH ₂ CH ₃	H	F	H	F	6-Cl
A-936	(CH ₂) ₂ OCH ₃	H	F	H	F	6-Cl
A-937	CH ₂ CH(OCH ₃) ₂	H	F	H	F	6-Cl
A-938	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	F	6-Cl
A-939	CH ₂ C ₆ H ₅	H	F	H	F	6-Cl
A-940	CH(CH ₃)C ₆ H ₅	H	F	H	F	6-Cl
A-941	(CH ₂) ₂ OC ₆ H ₅	H	F	H	F	6-Cl
A-942	(CH ₂) ₂ C ₆ H ₅	H	F	H	F	6-Cl
A-943	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	F	6-Cl
A-944	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	F	6-Cl
A-945	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	F	6-Cl
A-946	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	F	6-Cl
A-947	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	F	6-Cl
A-948	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	F	6-Cl
A-949	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	F	6-Cl
A-950	CH ₂ CH=CH ₂	H	F	H	F	6-Cl
A-951	cyclo-C ₃ H ₅	H	F	H	F	6-Cl
A-952	(CH ₂) ₂ NHCH ₃	H	F	H	F	6-Cl
A-953	H	H	F	H	CF ₃	6-F
A-954	CH ₃	CH ₃	F	H	CF ₃	6-F
A-955	CH ₂ CH ₃	CH ₂ CH ₃	F	H	CF ₃	6-F
A-956	CH ₃	H	F	H	CF ₃	6-F
A-957	CH ₂ CH ₃	H	F	H	CF ₃	6-F
A-958	(CH ₂) ₂ CH ₃	H	F	H	CF ₃	6-F
A-959	CH(CH ₃) ₂	H	F	H	CF ₃	6-F

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-960	CH ₂ CF ₃	H	F	H	CF ₃	6-F
A-961	C(CH ₃) ₃	H	F	H	CF ₃	6-F
A-962	CH ₂ CH(CH ₃) ₂	H	F	H	CF ₃	6-F
A-963	CH(CH ₃)CH ₂ CH ₃	H	F	H	CF ₃	6-F
A-964	(CH ₂) ₂ OCH ₃	H	F	H	CF ₃	6-F
A-965	CH ₂ CH(OCH ₃) ₂	H	F	H	CF ₃	6-F
A-966	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	CF ₃	6-F
A-967	CH ₂ C ₆ H ₅	H	F	H	CF ₃	6-F
A-968	CH(CH ₃)C ₆ H ₅	H	F	H	CF ₃	6-F
A-969	(CH ₂) ₂ OC ₆ H ₅	H	F	H	CF ₃	6-F
A-970	(CH ₂) ₂ C ₆ H ₅	H	F	H	CF ₃	6-F
A-971	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	CF ₃	6-F
A-972	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	CF ₃	6-F
A-973	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	CF ₃	6-F
A-974	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	CF ₃	6-F
A-975	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	CF ₃	6-F
A-976	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	CF ₃	6-F
A-977	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	CF ₃	6-F
A-978	CH ₂ CH=CH ₂	H	F	H	CF ₃	6-F
A-979	cyclo-C ₃ H ₅	H	F	H	CF ₃	6-F
A-980	(CH ₂) ₂ NHCH ₃	H	F	H	CF ₃	6-F
A-981	H	H	CF ₃	H	F	6-F
A-982	CH ₃	CH ₃	CF ₃	H	F	6-F
A-983	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	F	6-F
A-984	CH ₃	H	CF ₃	H	F	6-F
A-985	CH ₂ CH ₃	H	CF ₃	H	F	6-F
A-986	(CH ₂) ₂ CH ₃	H	CF ₃	H	F	6-F
A-987	CH(CH ₃) ₂	H	CF ₃	H	F	6-F
A-988	CH ₂ CF ₃	H	CF ₃	H	F	6-F
A-989	C(CH ₃) ₃	H	CF ₃	H	F	6-F
A-990	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	F	6-F
A-991	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	F	6-F
A-992	(CH ₂) ₂ OCH ₃	H	CF ₃	H	F	6-F
A-993	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	F	6-F
A-994	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	F	6-F
A-995	CH ₂ C ₆ H ₅	H	CF ₃	H	F	6-F
A-996	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	F	6-F
A-997	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	F	6-F
A-998	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	F	6-F
A-999	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	F	6-F

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1000	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	F	6-F
A-1001	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	F	6-F
A-1002	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	F	6-F
A-1003	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	F	6-F
A-1004	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	F	6-F
A-1005	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	F	6-F
A-1006	CH ₂ CH=CH ₂	H	CF ₃	H	F	6-F
A-1007	cyclo-C ₃ H ₅	H	CF ₃	H	F	6-F
A-1008	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	F	6-F
A-1009	H	H	CF ₃	H	F	6-CF ₃
A-1010	CH ₃	CH ₃	CF ₃	H	F	6-CF ₃
A-1011	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	F	6-CF ₃
A-1012	CH ₃	H	CF ₃	H	F	6-CF ₃
A-1013	CH ₂ CH ₃	H	CF ₃	H	F	6-CF ₃
A-1014	(CH ₂) ₂ CH ₃	H	CF ₃	H	F	6-CF ₃
A-1015	CH(CH ₃) ₂	H	CF ₃	H	F	6-CF ₃
A-1016	CH ₂ CF ₃	H	CF ₃	H	F	6-CF ₃
A-1017	C(CH ₃) ₃	H	CF ₃	H	F	6-CF ₃
A-1018	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	F	6-CF ₃
A-1019	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	F	6-CF ₃
A-1020	(CH ₂) ₂ OCH ₃	H	CF ₃	H	F	6-CF ₃
A-1021	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	F	6-CF ₃
A-1022	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	F	6-CF ₃
A-1023	CH ₂ C ₆ H ₅	H	CF ₃	H	F	6-CF ₃
A-1024	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	F	6-CF ₃
A-1025	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	F	6-CF ₃
A-1026	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	F	6-CF ₃
A-1027	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	F	6-CF ₃
A-1028	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	F	6-CF ₃
A-1029	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	F	6-CF ₃
A-1030	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	F	6-CF ₃
A-1031	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	F	6-CF ₃
A-1032	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	F	6-CF ₃
A-1033	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	F	6-CF ₃
A-1034	CH ₂ CH=CH ₂	H	CF ₃	H	F	6-CF ₃
A-1035	cyclo-C ₃ H ₅	H	CF ₃	H	F	6-CF ₃
A-1036	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	F	6-CF ₃
A-1037	H	H	CF ₃	H	CF ₃	6-F
A-1038	CH ₃	CH ₃	CF ₃	H	CF ₃	6-F
A-1039	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	CF ₃	6-F

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1040	CH ₃	H	CF ₃	H	CF ₃	6-F
A-1041	CH ₂ CH ₃	H	CF ₃	H	CF ₃	6-F
A-1042	(CH ₂) ₂ CH ₃	H	CF ₃	H	CF ₃	6-F
A-1043	CH(CH ₃) ₂	H	CF ₃	H	CF ₃	6-F
A-1044	CH ₂ CF ₃	H	CF ₃	H	CF ₃	6-F
A-1045	C(CH ₃) ₃	H	CF ₃	H	CF ₃	6-F
A-1046	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	CF ₃	6-F
A-1047	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	CF ₃	6-F
A-1048	(CH ₂) ₂ OCH ₃	H	CF ₃	H	CF ₃	6-F
A-1049	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	CF ₃	6-F
A-1050	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	CF ₃	6-F
A-1051	CH ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	6-F
A-1052	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	CF ₃	6-F
A-1053	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	CF ₃	6-F
A-1054	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	6-F
A-1055	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	CF ₃	6-F
A-1056	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	CF ₃	6-F
A-1057	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	CF ₃	6-F
A-1058	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	CF ₃	6-F
A-1059	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	CF ₃	6-F
A-1060	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	CF ₃	6-F
A-1061	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	CF ₃	6-F
A-1062	CH ₂ CH=CH ₂	H	CF ₃	H	CF ₃	6-F
A-1063	cyclo-C ₃ H ₅	H	CF ₃	H	CF ₃	6-F
A-1064	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	CF ₃	6-F
A-1065	H	H	CF ₃	H	CF ₃	6-Cl
A-1066	CH ₃	CH ₃	CF ₃	H	CF ₃	6-Cl
A-1067	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	CF ₃	6-Cl
A-1068	CH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1069	CH ₂ CH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1070	(CH ₂) ₂ CH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1071	CH(CH ₃) ₂	H	CF ₃	H	CF ₃	6-Cl
A-1072	CH ₂ CF ₃	H	CF ₃	H	CF ₃	6-Cl
A-1073	C(CH ₃) ₃	H	CF ₃	H	CF ₃	6-Cl
A-1074	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	CF ₃	6-Cl
A-1075	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1076	(CH ₂) ₂ OCH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1077	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	CF ₃	6-Cl
A-1078	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	CF ₃	6-Cl
A-1079	CH ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	6-Cl

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1080	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	CF ₃	6-Cl
A-1081	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	CF ₃	6-Cl
A-1082	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	CF ₃	6-Cl
A-1083	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	CF ₃	6-Cl
A-1084	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	CF ₃	6-Cl
A-1085	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	CF ₃	6-Cl
A-1086	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1087	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	CF ₃	6-Cl
A-1088	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1089	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	CF ₃	6-Cl
A-1090	CH ₂ CH=CH ₂	H	CF ₃	H	CF ₃	6-Cl
A-1091	cyclo-C ₃ H ₅	H	CF ₃	H	CF ₃	6-Cl
A-1092	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	CF ₃	6-Cl
A-1093	H	H	CF ₃	H	Cl	6-Cl
A-1094	CH ₃	CH ₃	CF ₃	H	Cl	6-Cl
A-1095	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	Cl	6-Cl
A-1096	CH ₃	H	CF ₃	H	Cl	6-Cl
A-1097	CH ₂ CH ₃	H	CF ₃	H	Cl	6-Cl
A-1098	(CH ₂) ₂ CH ₃	H	CF ₃	H	Cl	6-Cl
A-1099	CH(CH ₃) ₂	H	CF ₃	H	Cl	6-Cl
A-1100	CH ₂ CF ₃	H	CF ₃	H	Cl	6-Cl
A-1101	C(CH ₃) ₃	H	CF ₃	H	Cl	6-Cl
A-1102	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	Cl	6-Cl
A-1103	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	Cl	6-Cl
A-1104	(CH ₂) ₂ OCH ₃	H	CF ₃	H	Cl	6-Cl
A-1105	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	Cl	6-Cl
A-1106	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	Cl	6-Cl
A-1107	CH ₂ C ₆ H ₅	H	CF ₃	H	Cl	6-Cl
A-1108	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	Cl	6-Cl
A-1109	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	Cl	6-Cl
A-1110	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	Cl	6-Cl
A-1111	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	Cl	6-Cl
A-1112	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	Cl	6-Cl
A-1113	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	Cl	6-Cl
A-1114	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	Cl	6-Cl
A-1115	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	Cl	6-Cl
A-1116	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	Cl	6-Cl
A-1117	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	Cl	6-Cl
A-1118	CH ₂ CH=CH ₂	H	CF ₃	H	Cl	6-Cl
A-1119	cyclo-C ₃ H ₅	H	CF ₃	H	Cl	6-Cl

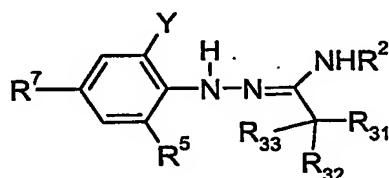
No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1120	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	Cl	6-Cl
A-1121	H	H	CF ₃	H	Cl	6-CF ₃
A-1122	CH ₃	CH ₃	CF ₃	H	Cl	6-CF ₃
A-1123	CH ₂ CH ₃	CH ₂ CH ₃	CF ₃	H	Cl	6-CF ₃
A-1124	CH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1125	CH ₂ CH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1126	(CH ₂) ₂ CH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1127	CH(CH ₃) ₂	H	CF ₃	H	Cl	6-CF ₃
A-1128	CH ₂ CF ₃	H	CF ₃	H	Cl	6-CF ₃
A-1129	C(CH ₃) ₃	H	CF ₃	H	Cl	6-CF ₃
A-1130	CH ₂ CH(CH ₃) ₂	H	CF ₃	H	Cl	6-CF ₃
A-1131	CH(CH ₃)CH ₂ CH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1132	(CH ₂) ₂ OCH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1133	CH ₂ CH(OCH ₃) ₂	H	CF ₃	H	Cl	6-CF ₃
A-1134	CH ₂ CH(OCH ₂ CH ₃) ₂	H	CF ₃	H	Cl	6-CF ₃
A-1135	CH ₂ C ₆ H ₅	H	CF ₃	H	Cl	6-CF ₃
A-1136	CH(CH ₃)C ₆ H ₅	H	CF ₃	H	Cl	6-CF ₃
A-1137	(CH ₂) ₂ OC ₆ H ₅	H	CF ₃	H	Cl	6-CF ₃
A-1138	(CH ₂) ₂ C ₆ H ₅	H	CF ₃	H	Cl	6-CF ₃
A-1139	(CH ₂) ₂ C ₆ H ₄ F	H	CF ₃	H	Cl	6-CF ₃
A-1140	(CH ₂) ₂ C ₆ H ₄ Cl	H	CF ₃	H	Cl	6-CF ₃
A-1141	(CH ₂) ₂ C ₆ H ₄ CN	H	CF ₃	H	Cl	6-CF ₃
A-1142	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1143	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	CF ₃	H	Cl	6-CF ₃
A-1144	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1145	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	CF ₃	H	Cl	6-CF ₃
A-1146	CH ₂ CH=CH ₂	H	CF ₃	H	Cl	6-CF ₃
A-1147	cyclo-C ₃ H ₅	H	CF ₃	H	Cl	6-CF ₃
A-1148	(CH ₂) ₂ NHCH ₃	H	CF ₃	H	Cl	6-CF ₃
A-1149	H	H	F	H	CF ₃	6-Cl
A-1150	CH ₃	CH ₃	F	H	CF ₃	6-Cl
A-1151	CH ₂ CH ₃	CH ₂ CH ₃	F	H	CF ₃	6-Cl
A-1152	CH ₃	H	F	H	CF ₃	6-Cl
A-1153	CH ₂ CH ₃	H	F	H	CF ₃	6-Cl
A-1154	(CH ₂) ₂ CH ₃	H	F	H	CF ₃	6-Cl
A-1155	CH(CH ₃) ₂	H	F	H	CF ₃	6-Cl
A-1156	CH ₂ CF ₃	H	F	H	CF ₃	6-Cl
A-1157	C(CH ₃) ₃	H	F	H	CF ₃	6-Cl
A-1158	CH ₂ CH(CH ₃) ₂	H	F	H	CF ₃	6-Cl
A-1159	CH(CH ₃)CH ₂ CH ₃	H	F	H	CF ₃	6-Cl

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1160	(CH ₂) ₂ OCH ₃	H	F	H	CF ₃	6-Cl
A-1161	CH ₂ CH(OCH ₃) ₂	H	F	H	CF ₃	6-Cl
A-1162	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	CF ₃	6-Cl
A-1163	CH ₂ C ₆ H ₅	H	F	H	CF ₃	6-Cl
A-1164	CH(CH ₃)C ₆ H ₅	H	F	H	CF ₃	6-Cl
A-1165	(CH ₂) ₂ OC ₆ H ₅	H	F	H	CF ₃	6-Cl
A-1166	(CH ₂) ₂ C ₆ H ₅	H	F	H	CF ₃	6-Cl
A-1167	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	CF ₃	6-Cl
A-1168	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	CF ₃	6-Cl
A-1169	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	CF ₃	6-Cl
A-1170	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	CF ₃	6-Cl
A-1171	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	CF ₃	6-Cl
A-1172	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	CF ₃	6-Cl
A-1173	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	CF ₃	6-Cl
A-1174	CH ₂ CH=CH ₂	H	F	H	CF ₃	6-Cl
A-1175	cyclo-C ₃ H ₅	H	F	H	CF ₃	6-Cl
A-1176	(CH ₂) ₂ NHCH ₃	H	F	H	CF ₃	6-Cl
A-1177	H	H	F	H	F	6-F
A-1178	CH ₃	CH ₃	F	H	F	6-F
A-1179	CH ₂ CH ₃	CH ₂ CH ₃	F	H	F	6-F
A-1180	CH ₃	H	F	H	F	6-F
A-1181	CH ₂ CH ₃	H	F	H	F	6-F
A-1182	(CH ₂) ₂ CH ₃	H	F	H	F	6-F
A-1183	CH(CH ₃) ₂	H	F	H	F	6-F
A-1184	CH ₂ CF ₃	H	F	H	F	6-F
A-1185	C(CH ₃) ₃	H	F	H	F	6-F
A-1186	CH ₂ CH(CH ₃) ₂	H	F	H	F	6-F
A-1187	CH(CH ₃)CH ₂ CH ₃	H	F	H	F	6-F
A-1188	(CH ₂) ₂ OCH ₃	H	F	H	F	6-F
A-1189	CH ₂ CH(OCH ₃) ₂	H	F	H	F	6-F
A-1190	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	H	F	6-F
A-1191	CH ₂ C ₆ H ₅	H	F	H	F	6-F
A-1192	CH(CH ₃)C ₆ H ₅	H	F	H	F	6-F
A-1193	(CH ₂) ₂ OC ₆ H ₅	H	F	H	F	6-F
A-1194	(CH ₂) ₂ C ₆ H ₅	H	F	H	F	6-F
A-1195	(CH ₂) ₂ C ₆ H ₄ F	H	F	H	F	6-F
A-1196	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	H	F	6-F
A-1197	(CH ₂) ₂ C ₆ H ₄ CN	H	F	H	F	6-F
A-1198	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	H	F	6-F
A-1199	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	H	F	6-F

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1200	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	H	F	6-F
A-1201	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	H	F	6-F
A-1202	CH ₂ CH=CH ₂	H	F	H	F	6-F
A-1203	cyclo-C ₃ H ₅	H	F	H	F	6-F
A-1204	(CH ₂) ₂ NHCH ₃	H	F	H	F	6-F
A-1205	H	H	Cl	Cl	Cl	5,6-Cl ₂
A-1206	CH ₃	CH ₃	Cl	Cl	Cl	5,6-Cl ₂
A-1207	CH ₂ CH ₃	CH ₂ CH ₃	Cl	Cl	Cl	5,6-Cl ₂
A-1208	CH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1209	CH ₂ CH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1210	(CH ₂) ₂ CH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1211	CH(CH ₃) ₂	H	Cl	Cl	Cl	5,6-Cl ₂
A-1212	CH ₂ CF ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1213	C(CH ₃) ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1214	CH ₂ CH(CH ₃) ₂	H	Cl	Cl	Cl	5,6-Cl ₂
A-1215	CH(CH ₃)CH ₂ CH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1216	(CH ₂) ₂ OCH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1217	CH ₂ CH(OCH ₃) ₂	H	Cl	Cl	Cl	5,6-Cl ₂
A-1218	CH ₂ CH(OCH ₂ CH ₃) ₂	H	Cl	Cl	Cl	5,6-Cl ₂
A-1219	CH ₂ C ₆ H ₅	H	Cl	Cl	Cl	5,6-Cl ₂
A-1220	CH(CH ₃)C ₆ H ₅	H	Cl	Cl	Cl	5,6-Cl ₂
A-1221	(CH ₂) ₂ OC ₆ H ₅	H	Cl	Cl	Cl	5,6-Cl ₂
A-1222	(CH ₂) ₂ C ₆ H ₅	H	Cl	Cl	Cl	5,6-Cl ₂
A-1223	(CH ₂) ₂ C ₆ H ₄ F	H	Cl	Cl	Cl	5,6-Cl ₂
A-1224	(CH ₂) ₂ C ₆ H ₄ Cl	H	Cl	Cl	Cl	5,6-Cl ₂
A-1225	(CH ₂) ₂ C ₆ H ₄ CN	H	Cl	Cl	Cl	5,6-Cl ₂
A-1226	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1227	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1228	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1229	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1230	CH ₂ CH=CH ₂	H	Cl	Cl	Cl	5,6-Cl ₂
A-1231	cyclo-C ₃ H ₅	H	Cl	Cl	Cl	5,6-Cl ₂
A-1232	(CH ₂) ₂ NHCH ₃	H	Cl	Cl	Cl	5,6-Cl ₂
A-1233	H	H	F	F	F	5,6-F ₂
A-1234	CH ₃	CH ₃	F	F	F	5,6-F ₂
A-1235	CH ₂ CH ₃	CH ₂ CH ₃	F	F	F	5,6-F ₂
A-1236	CH ₃	H	F	F	F	5,6-F ₂
A-1237	CH ₂ CH ₃	H	F	F	F	5,6-F ₂
A-1238	(CH ₂) ₂ CH ₃	H	F	F	F	5,6-F ₂
A-1239	CH(CH ₃) ₂	H	F	F	F	5,6-F ₂

No.	R ¹	R ²	R ⁵	R ⁶	R ⁷	Y _n
A-1240	CH ₂ CF ₃	H	F	F	F	5,6-F ₂
A-1241	C(CH ₃) ₃	H	F	F	F	5,6-F ₂
A-1242	CH ₂ CH(CH ₃) ₂	H	F	F	F	5,6-F ₂
A-1243	CH(CH ₃)CH ₂ CH ₃	H	F	F	F	5,6-F ₂
A-1244	(CH ₂) ₂ OCH ₃	H	F	F	F	5,6-F ₂
A-1245	CH ₂ CH(OCH ₃) ₂	H	F	F	F	5,6-F ₂
A-1246	CH ₂ CH(OCH ₂ CH ₃) ₂	H	F	F	F	5,6-F ₂
A-1247	CH ₂ C ₆ H ₅	H	F	F	F	5,6-F ₂
A-1248	CH(CH ₃)C ₆ H ₅	H	F	F	F	5,6-F ₂
A-1249	(CH ₂) ₂ OC ₆ H ₅	H	F	F	F	5,6-F ₂
A-1250	(CH ₂) ₂ C ₆ H ₅	H	F	F	F	5,6-F ₂
A-1251	(CH ₂) ₂ C ₆ H ₄ F	H	F	F	F	5,6-F ₂
A-1252	(CH ₂) ₂ C ₆ H ₄ Cl	H	F	F	F	5,6-F ₂
A-1253	(CH ₂) ₂ C ₆ H ₄ CN	H	F	F	F	5,6-F ₂
A-1254	(CH ₂) ₂ C ₆ H ₄ CH ₃	H	F	F	F	5,6-F ₂
A-1255	(CH ₂) ₂ C ₆ H ₄ CF ₃	H	F	F	F	5,6-F ₂
A-1256	(CH ₂) ₂ C ₆ H ₄ OCH ₃	H	F	F	F	5,6-F ₂
A-1257	(CH ₂) ₂ C ₆ H ₄ OCF ₃	H	F	F	F	5,6-F ₂
A-1258	CH ₂ CH=CH ₂	H	F	F	F	5,6-F ₂
A-1259	cyclo-C ₃ H ₅	H	F	F	F	5,6-F ₂
A-1260	(CH ₂) ₂ NHCH ₃	H	F	F	F	5,6-F ₂

Particularly preferred with respect to the intended use in the present invention are compounds of the formula I-B.



(I-B)

5

wherein

R⁷ is chlorine or trifluoromethyl;

10 R⁵ and Y are each independently chlorine or bromine;

R² is C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-alkynyl, or
C₃-C₆-cycloalkyl which may be substituted with 1 to 3 halogen atoms, or
C₂-C₄-alkyl which is substituted by C₁-C₄-alkoxy;

15

R^{31} and R^{32} are C_1 - C_6 -alkyl or may be taken together to form C_3 - C_6 -cycloalkyl which may be unsubstituted or substituted by 1 to 3 halogen atoms;

R^{33} is hydrogen or C_1 - C_6 -alkyl,

or the enantiomers or veterinarily acceptable salts thereof.

Preference is given to compounds of formula I-B wherein R^7 is trifluoromethyl.

Preference is further given to compounds of formula I-B wherein Y and R^5 are both chlorine.

Moreover, preferred are compounds of formula I-B wherein R^2 is C_1 - C_6 -alkyl, especially ethyl.

Preference is further given to compounds of formula I-B wherein R^{31} and R^{32} are both methyl.

Moreover, preferred are compounds of formula I-B wherein R^{31} and R^{32} form a cyclopropyl ring which is unsubstituted or substituted by 1 to 3 halogen atoms, especially chlorine and bromine.

Moreover, particularly preferred are compounds of formula I-B wherein R^{31} and R^{32} form a cyclopropyl ring which is substituted by 2 halogen atoms.

Moreover, particularly preferred are compounds of formula I-B wherein R^{31} and R^{32} form a cyclopropyl ring which is substituted by 2 chlorine atoms.

Particularly preferred are compounds of formula I-B wherein R^{31} and R^{32} form a 2,2-dichlorocyclopropyl ring.

Preference is further given to compounds of formula I-B wherein R^{33} is C_1 - C_6 -alkyl, especially methyl.

Particularly preferred are compounds of formula I-B wherein R^{31} , R^{32} and R^{33} are all methyl.

Moreover, particularly preferred are compounds of formula I-B wherein R^{31} , R^{32} and R^{33} form a moiety 1-methyl-2,2-dichlorocyclopropyl.

Preference is further given to compounds of formula I-B wherein R^7 is trifluoromethyl;

Y and R⁵ are each independently chlorine or bromine;

R² is C₁-C₆-alkyl;

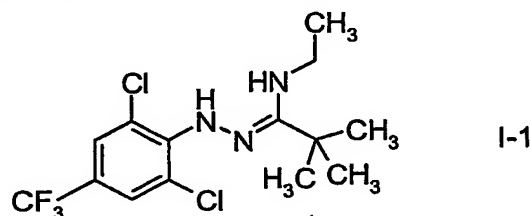
R³¹ and R³² are C₁-C₆-alkyl or may be taken together to form C₃-C₆-cycloalkyl which is substituted by 1 to 2 halogen atoms;

5 R³³ is C₁-C₆-alkyl;

or the enantiomers or veterinarily acceptable salts thereof.

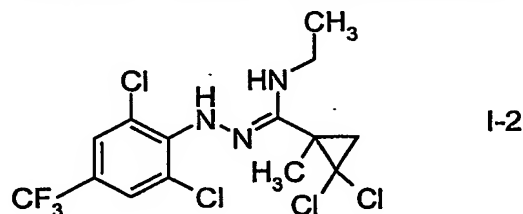
Particular preference is given to N-ethyl-2,2-dimethylpropionamide-2-(2,6-dichloro-
 10 α,α,α-trifluoro-p-tolyl)hydrazone and N-Ethyl-2,2-dichloro-1-methylcyclopropane-
 carboxamide-2-(2,6-dichloro-α,α,α-trifluoro-p-tolyl)hydrazone.

Furthermore, particular preference with respect to the use in the present invention is given to the compound of formula I-1 (N-ethyl-2,2-dimethylpropionamide-2-(2,6-dichloro-α,α,α-trifluoro-p-tolyl)-hydrazone):



15

Moreover, particular preference with respect to the use in the present invention is given to the compound of formula I-2 (N-Ethyl-2,2-dichloro-1-methylcyclopropane-carboxamide-2-(2,6-dichloro-α,α,α-trifluoro-p-tolyl)hydrazone):



20

Compounds of formula I and compositions comprising them are preferably used for controlling and preventing infestations and infections animals including warm-blooded animals (including humans) and fish. They are for example suitable for controlling and preventing infestations and infections ~~in~~ mammals such as cattle, sheep, swine, camels, deer, horses, pigs, poultry, rabbits, goats, dogs and cats, water buffalo, donkeys, fallow deer and reindeer, and also in fur-bearing animals such as mink, chinchilla and raccoon, birds such as hens, geese, turkeys and ducks and fish such as fresh- and salt-water fish such as trout, carp and eels.

25

30 Compounds of formula I and compositions comprising them are preferably used for controlling and preventing infestations and infections in domestic animals, such as dogs or cats.

Infestations in warm-blooded animals and fish include, but are not limited to, lice, biting lice, ticks, nasal bots, keds, biting flies, muscoid flies, flies, myiasitic fly larvae, chiggers, gnats, mosquitoes and fleas.

- 5 The compounds of formula I and compositions comprising them are suitable for systemic and/or non-systemic control of ecto- and/or endoparasites. They are active against all or some stages of development.

The compounds of formula I are especially useful for combating ectoparasites.

10

The compounds of formula I are especially useful for combating parasites of the following orders and species, respectively:

- 15 fleas (Siphonaptera), e.g. *Ctenocephalides felis*, *Ctenocephalides canis*, *Xenopsylla cheopis*, *Pulex irritans*, *Tunga penetrans*, and *Nosopsyllus fasciatus*,

cockroaches (Blattaria - Blattodea), e.g. *Blattella germanica*, *Blattella asahinae*, *Periplaneta americana*, *Periplaneta japonica*, *Periplaneta brunnea*, *Periplaneta fuliginosa*, *Periplaneta australasiae*, and *Blatta orientalis*,

20

- flies, mosquitoes (Diptera), e.g. *Aedes aegypti*, *Aedes albopictus*, *Aedes vexans*, *Anastrepha ludens*, *Anopheles maculipennis*, *Anopheles crucians*, *Anopheles albimanus*, *Anopheles gambiae*, *Anopheles freeborni*, *Anopheles leucosphyrus*, *Anopheles minimus*, *Anopheles quadrimaculatus*, *Calliphora vicina*, *Chrysomya bezziana*, *Chrysomya hominivorax*, *Chrysomya macellaria*, *Chrysops discalis*, *Chrysops silacea*, *Chrysops atlanticus*, *Cochliomyia hominivorax*, *Cordylobia anthropophaga*, *Culicoides furens*, *Culex pipiens*, *Culex nigripalpus*, *Culex quinquefasciatus*, *Culex tarsalis*, *Culiseta inornata*, *Culiseta melanura*, *Dermatobia hominis*, *Fannia canicularis*, *Gasterophilus intestinalis*, *Glossina morsitans*, *Glossina palpalis*, *Glossina fuscipes*, *Glossina tachinoides*, *Haematobia irritans*, *Haplodiplosis equestris*, *Hippelates* spp., *Hypoderma lineata*, *Leptoconops torrens*, *Lucilia caprina*, *Lucilia cuprina*, *Lucilia sericata*, *Lycoria pectoralis*, *Mansonia* spp., *Musca domestica*, *Muscina stabulans*, *Oestrus ovis*, *Phlebotomus argentipes*, *Psorophora columbiae*, *Psorophora discolor*, *Prosimulium mixtum*, *Sarcophaga haemorrhoidalis*, *Sarcophaga* sp., *Simulium vittatum*, *Stomoxys calcitrans*, *Tabanus bovinus*, *Tabanus atratus*, *Tabanus lineola*, and *Tabanus similis*,

25

30

35

- lice (Phthiraptera), e.g. *Pediculus humanus capitis*, *Pediculus humanus corporis*, *Pthirus pubis*, *Haematopinus eurytarnus*, *Haematopinus suis*, *Linognathus vituli*, *Bovicola bovis*, *Menopon gallinae*, *Menacanthus stramineus* and *Solenopotes capillatus*.

40

- ticks and parasitic mites (Parasitiformes): ticks (Ixodida), e.g. *Ixodes scapularis*, *Ixodes holocyclus*, *Ixodes pacificus*, *Rhiphicephalus sanguineus*, *Dermacentor andersoni*, *Dermacentor variabilis*, *Amblyomma americanum*, *Amblyomma maculatum*, *Ornithodoros hermsi*, *Ornithodoros turicata* and parasitic mites (Mesostigmata), e.g.
- 5 *Ornithonyssus bacoti* and *Dermanyssus gallinae*,

- Actinedida (Prostigmata) und Acaridida (Astigmata) e.g. *Acarapis* spp., *Cheyletiella* spp., *Ornithocheyletia* spp., *Myobia* spp., *Psorergates* spp., *Demodex* spp., *Trombicula* spp., *Listrophorus* spp., *Acarus* spp., *Tyrophagus* spp., *Caloglyphus* spp., *Hypodectes*
- 10 spp., *Pterolichus* spp., *Psoroptes* spp., *Chorioptes* spp., *Otodectes* spp., *Sarcoptes* spp., *Notoedres* spp., *Knemidocoptes* spp., *Cytodites* spp., and *Laminosioptes* spp,

- Bugs (Heteropterida): *Cimex lectularius*, *Cimex hemipterus*, *Reduvius senilis*, *Triatoma* spp., *Rhodnius* spp., *Panstrongylus* spp. and *Arilus critatus*,
- 15

Anoplurida, e.g. *Haematopinus* spp., *Linognathus* spp., *Pediculus* spp., *Phthirus* spp., and *Solenopotes* spp,

- Mallophagida (suborders Amblycerina and Ischnocerina), e.g. *Trimenopon* spp.,
- 20 *Menopon* spp., *Trinoton* spp., *Bovicola* spp., *Werneckiella* spp., *Lepikentron* spp., *Trichodectes* spp., and *Felicola* spp,

Roundworms Nematoda:

- 25 Wipeworms and Trichinosis (Trichosyringida), e.g. Trichinellidae (*Trichinella* spp.), (Trichuridae) *Trichuris* spp., *Capillaria* spp,

Rhabditida, e.g. *Rhabditis* spp, *Strongyloides* spp., *Helicephalobus* spp,

- 30 Strongylida, e.g. *Strongylus* spp., *Ancylostoma* spp., *Necator americanus*, *Bunostomum* spp. (Hookworm), *Trichostrongylus* spp., *Haemonchus contortus*, *Ostertagia* spp. , *Cooperia* spp., *Nematodirus* spp., *Dictyocaulus* spp., *Cyathostoma* spp., *Oesophagostomum* spp., *Stephanurus dentatus*, *Ollulanus* spp., *Chabertia* spp., *Stephanurus dentatus* , *Syngamus trachea*, *Ancylostoma* spp., *Uncinaria* spp.,
- 35 *Globocephalus* spp., *Necator* spp., *Metastrongylus* spp., *Muellerius capillaris*, *Protostrongylus* spp., *Angiostrongylus* spp., *Parelaphostrongylus* spp. *Aleurostrongylus abstrusus*, and *Diectophyma renale*,

- Intestinal roundworms (Ascaridida), e.g. *Ascaris lumbricoides*, *Ascaris suum*, *Ascaridia galli*, *Parascaris equorum*, *Enterobius vermicularis* (Threadworm), *Toxocara canis*, *Toxascaris leonine*, *Skrjabinema* spp., and *Oxyuris equi*,
- 40

Camallanida, e.g. *Dracunculus medinensis* (guinea worm)

Spirurida, e.g. *Thelazia* spp., *Wuchereria* spp., *Brugia* spp., *Onchocerca* spp., *Dirofilaria* spp., *Dipetalonema* spp., *Setaria* spp., *Elaeophora* spp., *Spirocerca lupi*, and
5 *Habronema* spp.,

Thorny headed worms (Acanthocephala), e.g. *Acanthocephalus* spp.,
Macracanthorhynchus hirudinaceus and *Oncicola* spp,

10 Planarians (Plathelminthes):

Flukes (Trematoda), e.g. *Faciola* spp., *Fascioloides magna*, *Paragonimus* spp.,
Dicrocoelium spp., *Fasciolopsis buski*, *Clonorchis sinensis*, *Schistosoma* spp.,
15 *Trichobilharzia* spp., *Alaria alata*, *Paragonimus* spp., and *Nanocyetes* spp,

Cercomeromorpha, in particular Cestoda (Tapeworms), e.g. *Diphylobothrium* spp.,
Tenia spp., *Echinococcus* spp., *Dipylidium caninum*, *Multiceps* spp., *Hymenolepis* spp.,
Mesocostoides spp., *Vampirolepis* spp., *Moniezia* spp., *Anoplocephala* spp., *Sirometra*
20 spp., *Anoplocephala* spp., and *Hymenolepis* spp.

20 The compounds of formula I and compositions containing them are particularly useful
for the control of pests from the orders Diptera, Siphonaptera and Ixodida.

Moreover, the use of the compounds of formula I and compositions containing them for
25 combating mosquitoes is especially preferred.

The use of the compounds of formula I and compositions containing them for
combating flies is a further preferred embodiment of the present invention.

30 Furthermore, the use of the compounds of formula I and compositions containing them
for combating fleas is especially preferred.

The use of the compounds of formula I and compositions containing them for
combating ticks is a further preferred embodiment of the present invention.

35 The compounds of formula I also are especially useful for combating endoparasites
(roundworms nematoda, thorny headed worms and planarians).

Administration can be carried out both prophylactically and therapeutically.

40 Administration of the active compounds is carried out directly or in the form of suitable
preparations, orally, topically/dermally or parenterally.

For oral administration to warm-blooded animals, the formula I compounds may be formulated as animal feeds, animal feed premixes, animal feed concentrates, pills, solutions, pastes, suspensions, drenches, gels, tablets, boluses and capsules. In addition, the formula I compounds may be administered to the animals in their drinking water. For oral administration, the dosage form chosen should provide the animal with 0.01 mg/kg to 100 mg/kg of animal body weight per day of the formula I compound, preferably with 0.5 mg/kg to 100 mg/kg of animal body weight per day.

Alternatively, the formula I compounds may be administered to animals parenterally, for example, by intraruminal, intramuscular, intravenous or subcutaneous injection. The formula I compounds may be dispersed or dissolved in a physiologically acceptable carrier for subcutaneous injection. Alternatively, the formula I compounds may be formulated into an implant for subcutaneous administration. In addition the formula I compound may be transdermally administered to animals. For parenteral administration, the dosage form chosen should provide the animal with 0.01 mg/kg to 100 mg/kg of animal body weight per day of the formula I compound.

The formula I compounds may also be applied topically to the animals in the form of dips, dusts, powders, collars, medallions, sprays, shampoos, spot-on and pour-on formulations and in ointments or oil-in-water or water-in-oil emulsions. For topical application, dips and sprays usually contain 0.5 ppm to 5,000 ppm and preferably 1 ppm to 3,000 ppm of the formula I compound. In addition, the formula I compounds may be formulated as ear tags for animals, particularly quadrupeds such as cattle and sheep.

Suitable preparations are:

- Solutions such as oral solutions, concentrates for oral administration after dilution, solutions for use on the skin or in body cavities, pouring-on formulations, gels;
- Emulsions and suspensions for oral or dermal administration; semi-solid preparations;
- Formulations in which the active compound is processed in an ointment base or in an oil-in-water or water-in-oil emulsion base;
- Solid preparations such as powders, premixes or concentrates, granules, pellets, tablets, boluses, capsules; aerosols and inhalants, and active compound-containing shaped articles.

Compositions suitable for injection are prepared by dissolving the active ingredient in a suitable solvent and optionally adding further ingredients such as acids, bases, buffer salts, preservatives, and solubilizers. The solutions are filtered and filled sterile.

- 5 Suitable solvents are physiologically tolerable solvents such as water, alkanols such as ethanol, butanol, benzyl alcohol, glycerol, propylene glycol, polyethylene glycols, N-methyl-pyrrolidone, 2-pyrrolidone, and mixtures thereof.

- 10 The active compounds can optionally be dissolved in physiologically tolerable vegetable or synthetic oils which are suitable for injection.

- 15 Suitable solubilizers are solvents which promote the dissolution of the active compound in the main solvent or prevent its precipitation. Examples are polyvinylpyrrolidone, polyvinyl alcohol, polyoxyethylated castor oil, and polyoxyethylated sorbitan ester.

Suitable preservatives are benzyl alcohol, trichlorobutanol, p-hydroxybenzoic acid esters, and n-butanol.

- 20 Oral solutions are administered directly. Concentrates are administered orally after prior dilution to the use concentration. Oral solutions and concentrates are prepared according to the state of the art and as described above for injection solutions, sterile procedures not being necessary.

- 25 Solutions for use on the skin are trickled on, spread on, rubbed in, sprinkled on or sprayed on.

- 30 Solutions for use on the skin are prepared according to the state of the art and according to what is described above for injection solutions, sterile procedures not being necessary.

- 35 Further suitable solvents are polypropylene glycol, phenyl ethanol, phenoxy ethanol, ester such as ethyl or butyl acetate, benzyl benzoate, ethers such as alkylene glycol alkylether, e.g. dipropylene glycol monomethylether, ketons such as acetone, methylethylketone, aromatic hydrocarbons, vegetable and synthetic oils, dimethylformamide, dimethylacetamide, transcitol, solketal, propylene carbonate, and mixtures thereof.

- 40 It may be advantageous to add thickeners during preparation. Suitable thickeners are inorganic thickeners such as bentonites, colloidal silicic acid, aluminium monostearate, organic thickeners such as cellulose derivatives, polyvinyl alcohols and their copolymers, acrylates and methacrylates.

Gels are applied to or spread on the skin or introduced into body cavities. Gels are prepared by treating solutions which have been prepared as described in the case of the injection solutions with sufficient thickener that a clear material having an ointment-like consistency results. The thickeners employed are the thickeners given above.

Pour-on formulations are poured or sprayed onto limited areas of the skin, the active compound penetrating the skin and acting systemically.

Pour-on formulations are prepared by dissolving, suspending or emulsifying the active compound in suitable skin-compatible solvents or solvent mixtures. If appropriate, other auxiliaries such as colorants, bioabsorption-promoting substances, antioxidants, light stabilizers, adhesives are added.

Suitable solvents which are: water, alkanols, glycols, polyethylene glycols, polypropylene glycols, glycerol, aromatic alcohols such as benzyl alcohol, phenylethanol, phenoxyethanol, esters such as ethyl acetate, butyl acetate, benzyl benzoate, ethers such as alkylene glycol alkyl ethers such as dipropylene glycol monomethyl ether, diethylene glycol mono-butyl ether, ketones such as acetone, methyl ethyl ketone, cyclic carbonates such as propylene carbonate, ethylene carbonate, aromatic and/or aliphatic hydrocarbons, vegetable or synthetic oils, DMF, dimethylacetamide, n-alkylpyrrolidones such as methylpyrrolidone, n-butylpyrrolidone or n-octylpyrrolidone, N-methylpyrrolidone, 2-pyrrolidone, 2,2-dimethyl-4-oxy-methylene-1,3-diox-olane and glycerol formal.

Suitable colorants are all colorants permitted for use on animals and which can be dissolved or suspended.

Suitable absorption-promoting substances are, for example, DMSO, spreading oils such as isopropyl myristate, dipropylene glycol pelargonate, silicone oils and copolymers thereof with polyethers, fatty acid esters, triglycerides, fatty alcohols.

Suitable antioxidants are sulfites or metabisulfites such as potassium metabisulfite, ascorbic acid, butylhydroxytoluene, butylhydroxyanisole, tocopherol.

Suitable light stabilizers are, for example, novantisolic acid.

Suitable adhesives are, for example, cellulose derivatives, starch derivatives, polyacrylates, natural polymers such as alginates, gelatin.

Emulsions can be administered orally, dermally or as injections.

Emulsions are either of the water-in-oil type or of the oil-in-water type.

They are prepared by dissolving the active compound either in the hydrophobic or in the hydrophilic phase and homogenizing this with the solvent of the other phase with the aid of suitable emulsifiers and, if appropriate, other auxiliaries such as colorants, absorption-promoting substances, preservatives, antioxidants, light stabilizers, viscosity-enhancing substances.

Suitable hydrophobic phases (oils) are:

- liquid paraffins, silicone oils, natural vegetable oils such as sesame oil, almond oil, castor oil, synthetic triglycerides such as caprylic/capric triglyceride, triglyceride mixture with vegetable fatty acids of the chain length C_8 - C_{12} or other specially selected natural fatty acids, partial glyceride mixtures of saturated or unsaturated fatty acids possibly also containing hydroxyl groups, mono- and diglycerides of the C_8 - C_{10} fatty acids,
- fatty acid esters such as ethyl stearate, di-n-butyl adipate, hexyl laurate, dipropylene glycol perlargonate, esters of a branched fatty acid of medium chain length with saturated fatty alcohols of chain length C_{16} - C_{18} , isopropyl myristate, isopropyl palmitate, caprylic/capric acid esters of saturated fatty alcohols of chain length C_{12} - C_{18} , isopropyl stearate, oleyl oleate, decyl oleate, ethyl oleate, ethyl lactate, waxy fatty acid esters such as synthetic duck coccygeal gland fat, dibutyl phthalate, diisopropyl adipate, and ester mixtures related to the latter,
- fatty alcohols such as isotridecyl alcohol, 2-octyldodecanol, cetylstearyl alcohol, oleyl alcohol, and
- fatty acids such as oleic acid and
- mixtures thereof.

Suitable hydrophilic phases are: water, alcohols such as propylene glycol, glycerol, sorbitol and mixtures thereof.

Suitable emulsifiers are:

- non-ionic surfactants, e.g. polyethoxylated castor oil, polyethoxylated sorbitan monooleate, sorbitan monostearate, glycerol monostearate, polyoxyethyl stearate, alkylphenol polyglycol ether;
- ampholytic surfactants such as di-sodium N-lauryl-p-iminodipropionate or lecithin;
- anionic surfactants, such as sodium lauryl sulfate, fatty alcohol ether sulfates, mono/dialkyl polyglycol ether orthophosphoric acid ester monoethanolamine salt;
- cation-active surfactants, such as cetyltrimethylammonium chloride.

Suitable further auxiliaries are: substances which enhance the viscosity and stabilize the emulsion, such as carboxymethylcellulose, methylcellulose and other cellulose and starch derivatives, polyacrylates, alginates, gelatin, gum arabic, polyvinylpyrrolidone, polyvinyl alcohol, copolymers of methyl vinyl ether and maleic anhydride, polyethylene glycols, waxes, colloidal silicic acid or mixtures of the substances mentioned.

Suspensions can be administered orally or topically/dermally. They are prepared by suspending the active compound in a suspending agent, if appropriate with addition of other auxiliaries such as wetting agents, colorants, bioabsorption-promoting substances, preservatives, antioxidants, light stabilizers.

Liquid suspending agents are all homogeneous solvents and solvent mixtures.

Suitable wetting agents (dispersants) are the emulsifiers given above.

Other auxiliaries which may be mentioned are those given above.

Semi-solid preparations can be administered orally or topically/dermally. They differ from the suspensions and emulsions described above only by their higher viscosity.

For the production of solid preparations, the active compound is mixed with suitable excipients, if appropriate with addition of auxiliaries, and brought into the desired form.

Suitable excipients are all physiologically tolerable solid inert substances. Those used are inorganic and organic substances. Inorganic substances are, for example, sodium chloride, carbonates such as calcium carbonate, hydrogencarbonates, aluminium oxides, titanium oxide, silicic acids, argillaceous earths, precipitated or colloidal silica, or phosphates. Organic substances are, for example, sugar, cellulose, foodstuffs and feeds such as milk powder, animal meal, grain meals and shreds, starches.

Suitable auxiliaries are preservatives, antioxidants, and/or colorants which have been mentioned above.

Other suitable auxiliaries are lubricants and glidants such as magnesium stearate, stearic acid, talc, bentonites, disintegration-promoting substances such as starch or crosslinked polyvinylpyrrolidone, binders such as starch, gelatin or linear polyvinylpyrrolidone, and dry binders such as microcrystalline cellulose.

The compositions which can be used in the invention can comprise generally from about 0.001 to 95% of the compound of formula I.

Generally it is favorable to apply the compounds of formula I in total amounts of 0.5 mg/kg to 100 mg/kg per day , preferably 1 mg/kg to 50 mg/kg per day.

5 Ready-to-use preparations contain the compounds acting against parasites, preferably ectoparasites, in concentrations of 10 ppm to 80 per cent by weight, preferably from 0.1 to 65 per cent by weight, more preferably from 1 to 50 per cent by weight, most preferably from 5 to 40 per cent by weight.

10 Preparations which are diluted before use contain the compounds acting against ectoparasites in concentrations of 0.5 to 90 per cent by weight, preferably of 1 to 50 per cent by weight.

15 Furthermore, the preparations comprise the compounds of formula I against endoparasites in concentrations of 10 ppm to 2 per cent by weight, preferably of 0.05 to 0.9 per cent by weight, very particularly preferably of 0.005 to 0.25 per cent by weight.

20 In a preferred embodiment of the present invention, the compositions comprising the compounds of formula I them are applied dermally / topically.

In a further preferred embodiment, the topical application is conducted in the form of compound-containing shaped articles such as collars, medallions, ear tags, bands for fixing at body parts, and adhesive strips and foils.

25 Generally it is favorable to apply solid formulations which release compounds of formula I in total amounts of 10 mg/kg to 300 mg/kg, preferably 20 mg/kg to 200 mg/kg, most preferably 25 mg/kg to 160 mg/kg body weight of the treated animal in the course of three weeks.

30 For the preparation of the shaped articles, thermoplastic and flexible plastics as well as elastomers and thermoplastic elastomers are used. Suitable plastics and elastomers are polyvinyl resins, polyurethane, polyacrylate, epoxy resins, cellulose, cellulose derivatives, polyamides and polyester which are sufficiently compatible with the compounds of formula I. A detailed list of plastics and elastomers as well as
35 preparation procedures for the shaped articles is given e.g. in WO 03/086075.

The active compounds can also be used as a mixture with synergists or with other active compounds which act against pathogenic endo- and ectoparasites.

40 The following list of pesticides together with which the compounds according to the invention can be used, is intended to illustrate the possible combinations, but not to impose any limitation:

Organophosphates: Acephate, Chlorfenvinphos, Diazinon, Dichlorvos, Dicrotophos, Dimethoate, Ethion, Fenitrothion, Fenthion, Isoxathion, Malathion, Phenthoate, Phosalone, Phosmet, Phoxim, Pirimiphos-methyl, Profenofos, Prothiofos, Sulprophos,
 5 Triazophos, Trichlorfon, Quintiofos, Coumaphos, Chlorphoxim, Bromophos-ethyl, 2,3-p-Dioxanedithiol-S,S-bis(O,O-diethylphosphorodithionat);

Carbamates: Alanycarb, Benfuracarb, Carbaryl, Carbosulfan, Fenoxycarb, Furathiocarb, Indoxacarb, Triazamate;

10 Pyrethroids: alpha-Cypermethrin, Deltamethrin, Ethofenprox, Fenvalerate, Cyhalothrin, Lambda-Cyhalothrin, Permethrin, Silafluofen, Tau-Fluvalinate, Tralomethrin, Zeta-Cypermethrin, Flumethrin, Cyfluthrin and its enantiomers and stereomers, Cypermethrin;

15 Arthropod growth regulators: a) chitin synthesis inhibitors: benzoylureas: Chlorfluazuron, Cyromazine, Diflubenzuron, Flucycloxuron, Flufenoxuron, Hexaflumuron, Lufenuron, Novaluron, Teflubenzuron, Triflumuron; Buprofezin, Diofenolan, Hexythiazox, Etoxazole, Clofentazine; b) ecdysone antagonists:
 20 Halofenozide, Methoxyfenozide, Tebufenozide; c) juvenoids: Pyriproxyfen, Methoprene, Fenoxycarb; d) lipid biosynthesis inhibitors: Spirodiclofen;

Neonicotinoids: Acetamiprid, Clothianidin, Flonicamid, Imidacloprid, Nitenpyram, Thiadocloprid, Thiamethoxam;

25 Synthetic coccidiosis compounds, polyetherantibiotics: Amprolium, Robenidin, Toltrazuril, Monensin, Salinomycin, Maduramicin, Lasalocid, Narasin, Semduramicin;

Various: Abamectin (Avermectins), Acequinocyl, Amitraz, Azadirachtin, Bifenazate,
 30 *Bacillus thuringiensis*, *Bacillus subtilis*, Cartap, Chlorfenapyr, Chlordimeform, Cyromazine, Diafenthiuron, Dinetofuran, Diofenolan, Enamectin, Endosulfan, Epsiprantel, Ethiprole, Fenazaquin, Fipronil, Formetanate, Formetanate hydrochloride, Hydramethylnon, Indoxacarb. 4-((2Z)-2-((4-(trifluoro-methoxy)anilino) carbonyl) hydrazono)-2-[3-(trifluoromethyl)-phenyl]ethyl} benzo-nitrile, L-2,3,5,6-tetrahydro-6-
 35 phenyl-imidazo[thiazole], Levamisole, Milbemectin (Milbemycins), Moxidectin, Praziquantel, Pyrantel, Pyridaben, Pymetrozine, Selamectin, Spinosad, Sulfur, Tebufenpyrad, and Thiocyclam.

40 In general, "parasitically effective amount" means the amount of active ingredient needed to achieve an observable effect on growth, including the effects of necrosis, death, retardation, prevention, and removal, destruction, or otherwise diminishing the occurrence and activity of the target organism. The parasitically effective amount can

vary for the various compounds/compositions used in the invention. A parasitically effective amount of the compositions will also vary according to the prevailing conditions such as desired parasitidal effect and duration, target species, mode of application, and the like.

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Examples of action against parasites

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1. Screening method to test contact activity against stable fly, yellowfever mosquito, house mosquito, malaria mosquito, cat flea, and brown dog tick via glass contact

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Glass vials (20 ml scintillation vials) were treated with 0.5 ml of a solution of active ingredient in acetone. Each vial was rolled uncapped for ca. 10 minutes to allow the a.i. to completely coat the vial and to allow for full drying of the acetone. Insects or ticks were placed into each vial. The vials were kept at 22 °C and were observed for treatment effects at various time intervals. Results are presented in Table I.

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2. Screening method to test contact activity against yellowfever mosquito, southern house mosquito, and malaria mosquito larvae via water treatment

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Well plates were used as test arenas. The active ingredient was dissolved in acetone and diluted with water to obtain the concentrations needed. The final solutions containing appr. 1% acetone were placed into each well. Approximately 10 mosquito larvae (4th-instars) in 1 ml water were added to each well. Larvae were fed one drop of liver powder each day. The dishes were covered and maintained at 22°C. Mortality was recorded daily and dead larvae and live or dead pupae were removed daily. At the end of the test remaining live larvae were recorded and percent mortality was calculated. Results are shown in Table I.

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Each test was replicated at least 3 times.

Results

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Tests conducted with compounds of formula I-1 and I-2 showed the following results:

Table I. Activity against various species.

Pest Common Name	Pest Latin Name	Rate	Days or Hours to achieve 100% mortality
Screening method to test contact activity via glass contact			
stable fly	<i>Stomoxys calcitrans</i>	10 ppm	4 hours
yellowfever mosquito	<i>Aedes aegypti</i>	10 ppm	4 hours
house mosquito	<i>Culex quinquefasciatus</i>	0.5 ppm	4 hours
malaria mosquito	<i>Anopheles albimanus</i>	1 ppm	1 day
cat flea	<i>Ctenocephalides felis</i>	100 ppm	2 days
brown dog tick	<i>Rhipicephalus sanguineus</i>	10 ppm	3-5 days
Screening method to test contact activity via water treatment			
yellowfever mosquito	<i>Aedes aegypti</i>	10 ppm	2 days
house mosquito	<i>Culex quinquefasciatus</i>	10 ppm	1 day
malaria mosquito	<i>Anopheles albimanus</i>	1.0 ppm	1 day

3. Activity against cat flea in an "artificial dog" apparatus

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The active ingredient was dissolved in acetone and mixed with an appropriate volume of defibrinated cattle blood. 5 ml of treated blood were poured into a feeding chamber fitted with a paraffin wax film membrane. The chamber with the treated blood was placed over a flea feeding chamber. The test was repeated for each of 5 dose concentrations of each of the active ingredients. Treatment effects, including knockdown, failure to feed after 24 hours, failure to lay eggs, etc, were observed at various intervals. Control tests were conducted with acetone / blood mixtures.

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Results

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Tests conducted with 100 ppm of compounds of formula I-1 and I-2 showed an over 60% killing rate of *Ctenocephalides felis*.